KONONENKO, L.I.; TISHCHENKO, M.A.; VITKUN, R.A.; POLUEKTOV, N.S.

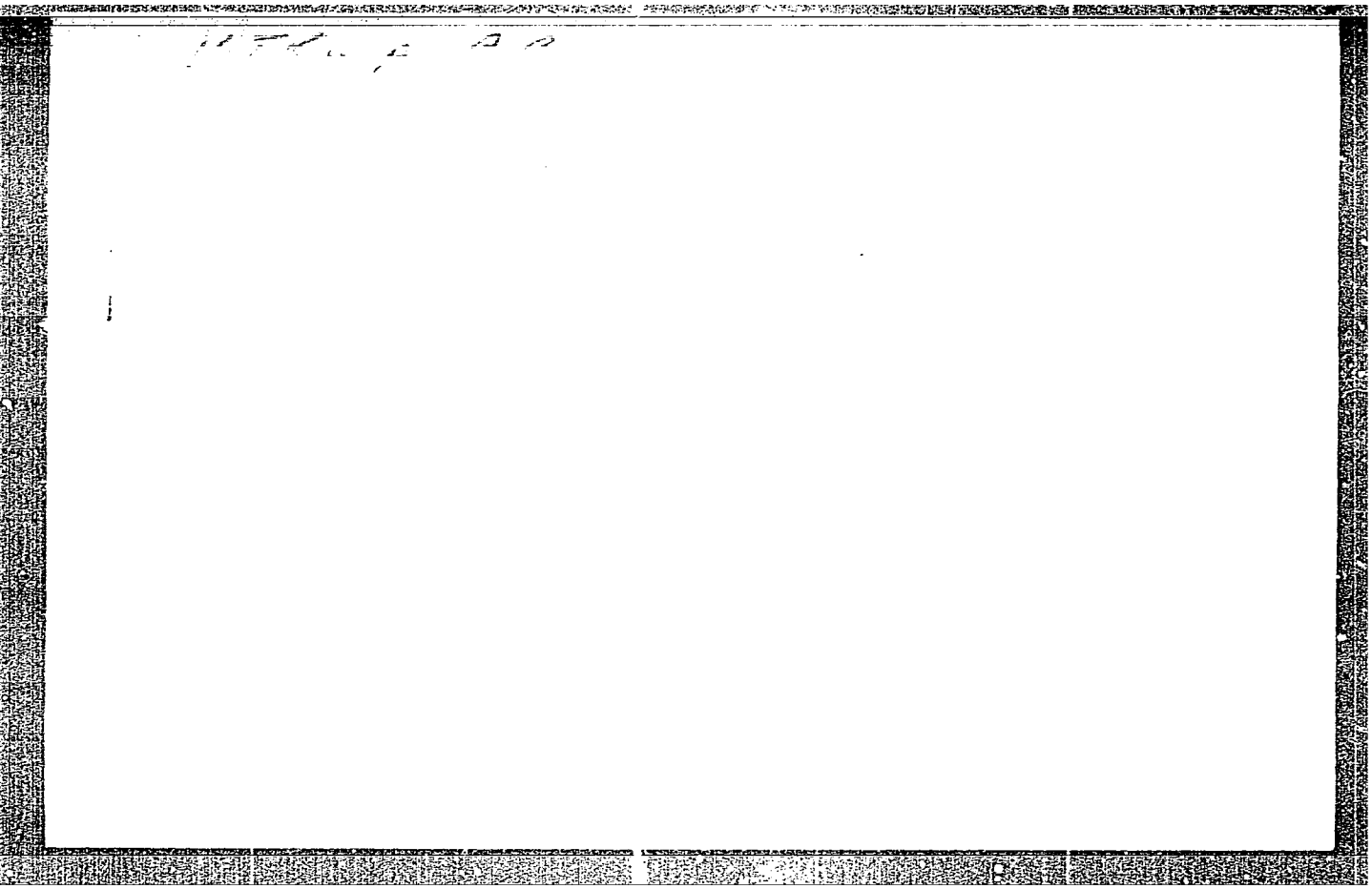
1,10-Phenanthrolinetenoyltrifluoroacetone complexes of rare-earth elements. Zhur.neorg.khim. 10 no.11:2465-2470 N '65. (MIRA 18:12)

1. Submitted April 13, 1964.

KOROLENKO, L.I.; MELENT'YEVA, Ye.V.; VITKUN, R.A.; POLUEKTOV, N.S.

Rare earth complexes with acetylacetone and 1,10-phenanthroline or 2,2'-dipyridyl. Ukr. khim. zhur. 31 no.10:1031-1035 '65.
(MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR, Laboratorii v Odesse. Submitted May 9, 1964.



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120013-9"

L 08660-67 EWT(m)/EWT(j) RM
ACC NR: AT6019041 (A) SOURCE CODE: UR/0078/66/011/002/0363/0368

AUTHOR: Tishchenko, M. A.; Kononenko, L. I.; Vitkun, R. A.; Poluektov, N. S. 27

ORG: none

TITLE: Complexes of rare-earth elements with 1-phenyl-3-methylpyrazolone-5 and 1-tolyl-3-methylpyrazolone-5

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 2, 1966, 363-368

TOPIC TAGS: rare earth element, terbium compound, dysprosium compound, neodymium compound, yttrium compound, erbium compound, fluorescence

ABSTRACT: Complexes of Pr, Nd, Er, Y, To, and Dy with 1-phenyl-3-methylpyrazolone-5 or 1-tolyl-3-methylpyrazolone-5 were prepared by a modified Knorr's method (Ann. Chem. 238, 137, 1887). Urotropine was added to the reaction mixture to keep it neutral. The results of the analysis of the complexes prepared are given in Table 1. Among the complexes studied only the Tb and Dy complexes were fluorescent (See Figures 1 and 2). Orig. art. has: 5 fig. and 2 tables.

Card 1/3 UDC: 546.65 : 541.49

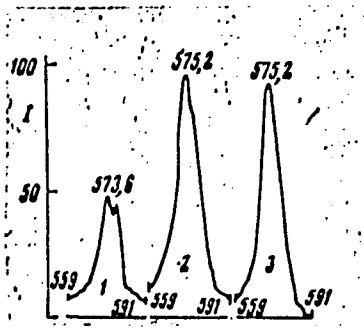


Fig. 1

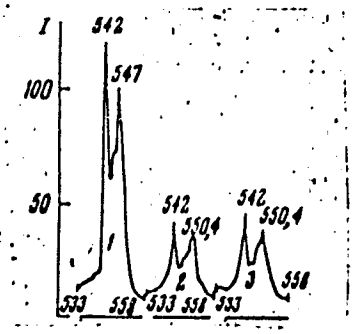


Fig. 2

Figures 1 and 2. Fluorescence spectra of Dy (Fig. 1) and Tb (Fig. 2) complexes with 4'-sulfophenyl-3-methylpyrazolone-5 (1), 1-phenyl-3-methylpyrazolone-5 (2), and 1-tolyl-3-methylpyrazolone-5 (3)

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Table 1. Results of the analysis of the phenyl-methyl- and tolyl-methylpyrazolone complexes

Complex	Melting point, C	Calculated, %			Found, %			Ratio Me:PhMP (or TMP)
		Me	PhMP (TMP)	H_2O	Me	PhMP (TMP)	H_2O	
Pr-tri(PhMP)-ate	206—207	20,85	76,5	2,65	20,1	77	2,8	1:3,1
Nd-tri(PhMP)-ate	210—211	21,2	76,16	2,64	21,0	75,8	3,0	1:2,98
Er-tri(PhMP)-ate	208—210	23,8	73,6	2,6	22,9	73,7	2,9	1:3,08
Y-tri(PhMP)-ate	198—200	14,2	82,9	2,9	13,5	82,1	3,7	1:3,1
Tb-tri(TMP)-ate	208—210	21,5	76,0	2,4	20,3	76,0	2,6	1:3,15
Nd-tri(TMP)-ate	207—209	19,8	77,7	2,5	20,2	78,0	2,5	1:2,98

Me = rare-earth element; PhMP = 1-phenyl-3-methylpyrazolone-5; TMP = 1-tolyl-3-methylpyrazolone

SUB CODE: 07/ SUBM DATE: 25Jun64/ ORIG REF: 003/ OTH REF: 006

Card 3/3 mlr

VITKUP, Abram Borisovich, kandidat tekhnicheskikh nauk; SKRAMTAYEV, B.G., redator; GORCHAKOV, G.I., nauchnyy redaktor; KUYBYSHEVA, G.V., redaktor; GILENSON, P.G., tekhnicheskiy redaktor.

[Effect methods of steam-curing concrete] Effektivnye rezhimy teplovlazhnostnoi obrabotki betonov. Pod.red.B.G.Skramtaeva. Moskva, Gos.izd-vo lit-ry po stroit.materialam, 1957. 119 p. (MIRA 10:11)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektory SSSR (for Skramtayev).

(Precast concrete)

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5316

Author: Vitkup, A. B.

Institution: None

Title: Method for the Preparation of Fast Hardening Concrete

Original Publication: Beton i zhelezobeton, 1956, No 8, 284-287

Abstract: Description of experiments on preparation of fast hardening concrete, with Portland cement of grades 300-500. On hardening under ordinary conditions strength of the concrete after 24 hours amounts to 50-80% R_{28}. On using a short duration heat and moisture treatment, comprising an isothermal process (at 80°) of 1-2 hours and a total cycle of 5-6 hours, strength of the concrete amounts to 70-100% R_{28}. Rapid increase of the strength of concrete is attained on placing concrete mixtures with a cone shrinkage of 1-1.5 cm. To accelerate hardening of the concrete use was made of the method of activation of the mix,

Card 1/2

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5316

Abstract: for 1.5-3 minutes, with crusher rolls, using an additive that improves the composition of binder and fine aggregate (granulated, acidic blast furnace slag) and additions of hardening accelerator -- $CaSO_4.0.5\ H_2O$ and $CaCl_2$. Added slag amounted to 1/2 of the weight of sand, $CaCl_2$ was added in an amount of 2%, gypsum in an amount of 5%, on the basis of the weight of cement. Cement, fine aggregate, additions of accelerator of hardening and 85% of the required amount of water were worked with crushing rolls for 3 minutes. Thereafter the activated mix was combined with coarse aggregate and the remaining 15% of water were added. Expenditure of cement was of 330 kg/m^3; water/cement = 0.5; shrinkage of standard cone was of 1.5 cm. Settling of the concrete mixture was effected on a standard vibrator platform with added load of 60 g/cm^2.

Card 2/2

VITKUP, A. B.

SOV/97-59-1-18/18

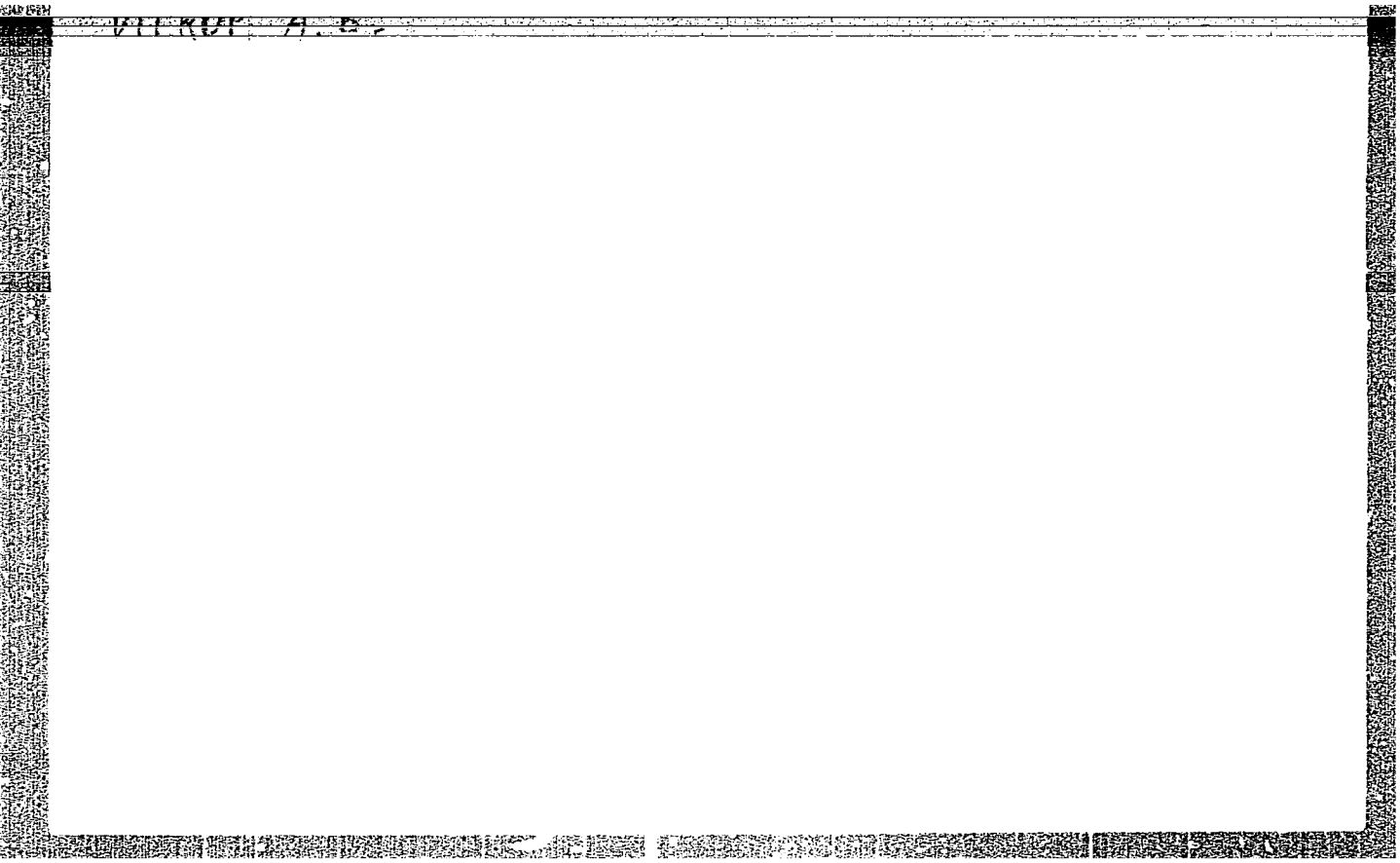
AUTHOR: None Given

TITLE: Book Review (Kritika i bibliografiya)

PERIODICAL: Beton i Zhelezobeton, 1959, Nr 1, pp 47-48 (USSR)

ABSTRACT: The following book is reviewed: A. B. Vitkup, "Effective conditions for steam curing of concretes", Promstroyizdat, 1957. The criticism is favourable.

Card 1/1



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120013-9"

VITKUP, A. E.

"Effective Range for the Heat-and Moisture-Treatment of Concretes and a Quick Method for Testing Cements." Cand Tech Sci, Khar'kov Construction Engineering Inst, Khar'kov, 1954. (RZhKhim, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

VITKUP, A.B., kandidat tekhnicheskikh nauk; MUNITS, A.P., redaktor izdatel'stva; BOROVNEV, N.K., tekhnicheskiy redaktor

[Instructions for speedy determination of the activeness of cements according to the method of the Southern Institute for Construction Research] Instruktsiia po uskorennomu opredeleniiu aktivnosti tsementov po metodu IUzhNII. (I 205-55/MSPMKhP). Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 15 p. (MLRA 10:1)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva predpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti. Tekhnicheskoye upravleniye. 2. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu Ministerstva stroitel'stva predpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti SSSR (for Vitkup)
(Cement--Analysis)

VITKUP, A.B., kandidat tekhnicheskikh nauk.

Method for preparing rapid hardening concretes. Bet. i zhel.-bet. no.8:284-287 Ag '56. (MLRA 9:10)

(Concrete)

VITKUP, A.B., inzhener.

New rapid cement testing method. TSement 20 no.1:3-8 Ja-F '54.
(MLRA 7:2)
(Cement--Testing)

VITKUP, A.B.

Rapid methods of testing cements. A. B. Vitkup. *Tsement* 20, No. 1, 5-8(1954).—Specimens are hardened under the following conditions: at 20° for 24 hrs., rise to 40° at 10°/hr., rise to 80° at 20°/hr., holding at 80° for 1 hr., drop to 50° at 3°/hr., and drop to 20° at 3.75°/hr.—a total of 48 hrs. Hardening in satd. steam is with automatic controls. Results are converted to 28-day test values of specimens tested after hardening under standard conditions. S. S. Ogandzhanova. *Ibid.* 8-10.—Specimens are hardened under standard conditions for 24 hrs. and then steamed at 100° for 1.5-2 hrs. prior to testing. Crushing strength by rapid and standard methods differs by ± 8% while bending strength by rapid method is 2.7-3.3 times greater than tensile strength by standard method. G. M. Rudchuk and N. P. Shtefert. *Ibid.* 10-13.—Specimens were hardened under standard conditions for 24 hrs. and then steamed at 100° for 4 hrs. prior to testing. Results indicate that coeff. of intensity R_n/R_7 and empir. equation $R_{28} = a(R_3 + 2R_7/3) + b$ can be used to det. the grade and 28-day strength of cements. The coeffs. a and b were detd. for each cement works by the method of least squares.

R. Z. Kenaich

VITKUP, A.B., kand.tekhn.nauk; YASNOBULKA, Kh.R., tekhnik

Coarse aggregates made of marls from the Kharkov deposits. Sbor. trud. IUZHNII no.2:54-57 '59. (MIRA 13:9)

1. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu.
(Marl) (Aggregates (Building materials))

VITKUP, A.B., kand.tekhn.nauk; YASNOBULKA, Kh.R., tekhnik

Activated concrete based on silica compositions to be used in making construction elements. Sbor. trud. IUZHNII no.2:62-72 '59.
(MIRA 13:9)

1. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu.
(Lightweight concrete)

Vil'kap, I. M.

18(0) PHASE I BOOK EXPLOITATION SOV/2301

Metallurgiya: sbornik statey, [no.] 1 (Metallurgy; Collection of Articles, No. 1) [Leningrad] Sudpromgiz, 1958. 177 p. 1,500 copies printed.

Resp. Ed.: G. I. Kapyrin, Candidate of Technical Sciences; Ed.: A. V. Popov; Tech. Ed.: O. I. Kotlyakova.

PURPOSE: This book is intended for engineers and technicians at industrial plants, for scientific personnel at research and educational institutions, and for students of advanced metallurgy.

COVERAGE: The articles in this collection deal with the production and hot forming of steel and titanium ingots. Both theoretical and practical aspects are covered. Topics discussed include: crack formation during thermomechanical treatment, dependence of plasticity of low-carbon chrome-nickel steel on the method of steelmaking, vacuum melting of austenitic stainless steel, beneficial effect of hot deformation on steel properties, vectorial properties of sheet metal as related to rolling conditions, crystallization and ingot structure, present status of titanium-ingot production, etc. Numerous references, principally Soviet, accompany the articles.

Card 1/3

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

GO/lsb
10-12-59

VITKUP, YE. B

Call Nr: Not given

AUTHOR: Gokun, V.B.

TITLE: Design Bases for Economy of Metal; Reduction of Weight in Machines (Konstruktivnyye predposylki ekonomii metalla; snizheniye vesa mashin)

PUB. DATA: Mashgiz, Moscow-Kiyev, 1957, 161 pp., 8000 copies

ORIG. AGENCY: None given

EDITOR: Vitkup, Ye. B., Candidate of Technical Sciences, Docent; Chief Ed. of the Ukrainian Branch of Mashgiz, Zalogin, N.S.; Publ. House Ed: Soroka, M.S.; Reviewer: Lur'ye, G.B., Doctor of Technical Sciences, Professor

PURPOSE: The book is intended for designers of machine-building concerns.

COVERAGE: The book considers basic factors which affect weight and dimensions of a machine and discusses the reduction of weight in machines. The full complex of questions related to design of rational, low-weight machines is outlined. All material is abundantly illustrated with factual examples taken from Russian industrial practice. There are 41 USSR references.

Card 1/3

Call Nr: Not given

Design Bases for Economy of Metal; Reduction of Weight in Machines (cont)

TABLE OF CONTENTS

Card 2/3

Call Nr: Not given

Design Bases for Economy of Metal; Reduction of Weight in Machines (cont)

AVAILABLE: Library of Congress

Card 3/3

VITKUP, YE. B.

VITKUP, YE. B. -- "Investigation of Problems of Creating Guaranteed Pressures on the Junctions of Threaded Joints in the Overhauling of an Automobile." Min Higher Education Ukrainian SSR, Kiev Motor Vehicle and Road Inst, Kiev, 1955. (Dissertations for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis': No. 39, 24 Sept 55

LEVINSKIY, Iosif Viktorovich; VITKUP, Ye.B., kandidat tekhnicheskiy nauk, retsenzent; SOROKA, M.S., redaktor; LYKHOTA, M.A., tekhnicheskiy redaktor

[Safety manual for operators of lifting slings] Pamiatka po tekhnike bezopasnosti dlia stropal'shchikov. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 35 p. (MLRA 9:11)
(Slings and hitches--Safety measures)

VITKUP, Ye.B., kand.tekhn.nauk, dotsent

Elastic deformations in stressed dismountable joints. Vest. mash. 41 no. 5:44-46 My '61. (MIRA 14:5)
(Fastenings)

VITKUP, Ye.B.

SAKHNENKO, Vladimir L'vovich; MAKSIMOVICH, Vadim Aleksandrovich; TROITSKIY, Anatoliy Vasil'yevich; TROCHUN, Ivan Petrovich; POTISHKO, Aleksey Vasil'yevich; AVRAMENKO, Luka Avksent'yevich; VAHEYKIS, Arnol'd Mikhaylovich; VITKUP, Ye.B., redaktor; RAYKO, M.V., redaktor; SAMOKHVALOV, Ya.A., vedushchiy redaktor; VAL'CHUK, G.I., vedushchiy redaktor; PATSALYUK, P.M., tekhnicheskiy redaktor

[Atlas of machine parts; mechanical joints and couplings] Atlas detalei mashin; soedineniia i mufty. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1956. 146 p. (MLRA 10:2)
(Couplings) (Welding) (Fastenings)

USSR / General Problems of Pathology. Allergy. U

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102425.

Author : Vitkus, A.
Inst : Kaunas Medical Institute.
Title : The Nerves of the Spleen and Their Morphologic Changes Under the Influence of Sensitization and Anaphylactic Shock.

Orig Pub: Kauno med. inst. darbai, 1957, 5, 287-293.

Abstract: 5 ml of horses serum (HS) was passed through the vessels of an isolated cat spleen, connected only by the nerves with the organism of a normal cat or sensitized by means of HS; the spleen was taken out after appearance of anaphylactic shock or after 10 min. and was prepared according to the method of Bilshowsky-Gross or Kompos. As a result of

Card 1/2

USSR / General Problems of Pathology. Allergy. U

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102425.

Abstract: shock, argyrophilia, varicose thickening of axons, swelling of nerve bundles, increase and incorrect tortuosity of nerve fibers were noted. -- From the author's resume.

Card 2/2

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64797.

Author : Vitkus, A.
Inst : Kaunas Medical Institute.
Title : Nerves of the Vessels of the Spleen.

Orig Pub: Kauno Med inst. Darbai, Tr. Kaunassk. med. in-ta, 1957, 4, 41-51.

Abstract: The nerves of the intra-organic vessels of the spleen in cats were studied, handling the material according to Bil'shovski-Gross and Campos. Periarterial plexuses as well as plexuses in the muscular coat were found. Free nerve endings in the the form of various branchings and capsuled corpuscles of the Krause type in the walls of arter-

Card 1/2

VITKUP, I.Kh., inzh.

Causes determining the effect of hot deformation on the improvement of steel properties. Metallurgiia 1:71-79 '58.
(MIRA 12:9)

(Steel--Metallography) (Forging)

VITKUP, YE. S.

A More Exact Calculation of the Rigidity of Threaded-Joint Elements.

Povsheniye iznosostoykosti i sroka sluzhby mashin. t. 2 (increasing the Wear Resistance and Extending the Service Life of Machines. v. 2) Diyev, Izd-vo AN UkrSSR, 1960. 290 p. 3,000 copies printed. (Series: Its: Trudy, t. 2)

Sponsoring Agency: Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo mashinostroitel' noy promyshlennosti. Tsentral'noye i Kiyevskoye oblastnoye pravleniya. Institut mekhaniki AN UkrSSR.

Editorial Board: Resp. Ed.: B. D. Grozin; Deputy Resp. Ed.: D. A. Draygor; M. P. Braun, I. D. Faynerman, I. V. Kragel 'skiy; Scientific Secretary: M. L. Barabash; Ed. of v. 2: Ya. A. Samokhvalov; Tech. Ed.: N. P. Rakhlina.

COVERAGE: The collection contains papers presented at the Third Scientific Technical Conference held in Kiyev in September 1957 on problems of increasing the wear resistance and extending the service life of machines. The conference was sponsored by the Institut stroitel'noy mekhaniki AN UkrSSR (Institute of Structural Mechanics of the Academy of Sciences Ukrainian SSR), and by the Kiyevskaya oblastnaya organizatsiya nauchno-tekhnicheskogo obshchestva mashinostroitel' noy promyshlennosti (Keyev Regional Organization of the Scientific Technical Society of the Machine-Building Industry).

VITKUS, A.S.

First scientific conference of anatomists, histologists and embryologists of the Lithuanian S.S.R. with the participation of morphologists of the Latvian S.S.R., Estonian S.S.R. and White Russian S.S.R. in Kaunas, June 21-23, 1962. Arkh. anat., gist. i embr. 43 no.12:105-107 1962 (MIRA 17:5)

1. Adres avtora: Kaunas, ul. Mitskevichyusa, 9, kafedra gistologii i embriologii Kaunaskogo meditsinskogo instituta.

VITKUS, A.S., Cand Med Sci--(diss/ "Intra-organ nerves of the spleen and their morphological changes under the effect of [redacted] and anaphylactic shock." Kaunas, 1956. 21 pp (Min of Health Lithuanian SSR. Kaunas State Med Inst), 200 copies (KL,26-58,115)

Synthesis of β-(β-anthraquinonyl)-β-aminopropionic acid and its derivatives. A. Pivenas and J. Vitkus. *Kauno Politech. Inst., Darbai* 7, 25–31 (1957) (Russian summary).—β-Anthraquinonecarboxaldehyde (I) was obtained in 28% yield by oxidation of 23.3 g. β-methylanthraquinone with 16.6 g. SeO_2 at 240° for 3 hrs., m. 188° (AcOH). *β-(β-anthraquinonyl)-β-aminopropionic acid* (II) was obtained from I by 3 methods. II was obtained in 18% yield by treating 7.1 g. I and 4.2 g. malonic acid (III) at 100° for 10 hrs. with 60 ml. 6% NH_3 soln. in abs. EtOH. After 1 hr. the EtOH was distd., the product extd. with aq. HCl, the filtrate concd., the solids sepd., dissolved in aq. HCl, and neutralized with satd. AcONa soln. to ppt. II. II was obtained in 47% yield by treating 4.7 g. I and 3.1 g. III for 10 hrs. at 100° with 3 g. $AcONH_4$ soln. in 120 ml. EtOH, and distg. 100 ml. EtOH. II was obtained in 50% yield by treating 11 g. I and 6.5 g. III at 100° for 10 hrs. with 13.1 g. $AcONH_4$ soln. in 150 ml. AcOH, distg. 125 ml. AcOH, adding 100 ml. H_2O, filtering, acidifying, and concg. The H_2O-insol. portion was extd. with dil. HCl and II sepd. as above, m. 248–50°; II.HCl m. 238–40° (EtOH); II *N*-Bz deriv. m. 226.5–7.5° (EtOH); II *N*-Ac deriv. m. 242° (EtOH). II *N*-Me deriv. was obtained in 34% yield by treating 2.4 g. I, 2 g. $MeNH_2$.HCl, 1.3 g. III, and 1.0 g. anhyd. AcOK with 25 ml. AcOH, m. 229–31° (EtOH). *β-(β-Anthraquinonyl)-β-ureidopropionic acid* (IV), obtained in 93% yield by treating 4.4 g. II and 2 ml. EtOH at 100° for 14 hrs. with 13.2 g. urea soln. in 150 ml. H_2O, m. 185.0–5.5° (EtOH). *6-(β-Anthraquinonyl)dihydro uracil*, obtained in 75% yield by treating 3.4 g. IV with 180 ml. concd. HCl m. 285° (EtOH); it is hydrolyzed to IV in 5% NaOH soln. D. Satas

7 Zgag (May) 2

ACC NR: AM6010193 Monograph UR/

Ragul'skis, Kazimeras Mikolo; Vitkus, Ionas Iono; Ragul'skene, Vida Leono

Self-synchronization of mechanical systems. [pt] 1: Self-synchronizing and vibro- percussive systems (Samosinkhronizatsiya mekhanicheskikh sistem. [ch.] 1: Samosinkhronnyye i vibroudarnyye sistemy) Vilnyus, Izd-vo "Mintis", 1965. 185 p. illus., biblio. (At head of title: Akademiya nauk Litovskoy SSR. Institut energetiki i elektrotekhniki) 1400 copies printed.

TOPIC TAGS: mechanical engineering, vibration theory, vibration analysis, mechanical vibration, self synchronizing mechanical system, vibropercussive mechanical system

PURPOSE AND COVERAGE: The results of investigations of the dynamics and stability of self-synchronizing and vibropercussive systems are presented. Principles of the theory of self-synchronizing systems and the synthesis of such systems in accordance with given dynamic characteristics are discussed. Analytic relationships for calculating their steady-state modes of motion, existence conditions, and stability, are presented as well as equations of small oscillations; also practical systems are solved. A number of new results

Card 1/3

ACC NR: AM6010193

connected with the dynamics and stability of vibropercussive systems are obtained, and many one- and two-mass vibropercussive systems are investigated. The analytic results obtained here were confirmed experimentally (in the majority of cases), and with the aid of computers. For the most part, only the results of the personal investigations of the authors are given. This book is intended for scientists and engineers.

TABLE OF CONTENTS: [abridged]:

Card 2/3

ACC NR: AM6010193

SUB CODE: 26/ SUBM DATE: 03Dec65/ ORIG REF: 415/ OTH REF: 055/

Card 3/3

VITKUS, I V.

VITKUS, I. V.: "The synthesis of beta-amino acids of the anthracene series and their transformation". Vil'nyus,1955. Acad Sci Lithuanian SSR. Inst of Chemistry and Chemical Technology. (Dissertations for the degree of Candidate of Chemical Sciences.)

SO: Knizhnaya Letopis' No 50 10 December 1955. Moscow.

VITKUS, A.

Synthesis of *N*-(α- and β-anthraquinonyl)-β-aminopropionic acids and their derivatives. A. Purėnas and J. Vitkus (Kaunas Politech. Inst., Kaunas, Lithuania). *Kauno Politech. Inst. Darbai* 6, 179-84(1959)(Russian summary) — Me *N*-(α-anthraquinonyl)-β-aminopropionate (I) was obtained in 53% yield by heating 22.3 g. α-aminoanthraquinone (II), 12 g. Me acrylate (III), and 0.5 g. AcOH in a sealed tube 60 hrs. at 115–20°. Fractional crystn. from EtOH gave cherry red crystals, m. 112–13°. Me *N*-(β-anthraquinonyl)-β-aminopropionate (IV) was obtained in 48% yield by heating 22.3 g. β-aminoanthraquinone (V), 1.29 g. III, and 0.5 g. AcOH 72 hrs. at 115–20°. Fractional crystn. from EtOH gave orange red crystals, m. 128–30°. *N*-(α-Anthraquinonyl)-β-aminopropionitrile (VI) was obtained in 16% yield by heating (at 115–20°, 60 hrs., sealed tube) 22.3 g. II, 10.6 g. acrylonitrile (VII), and 0.5 g. H_2SO_4 (sp. gr. 1.84). Fractional crystn. from EtOH gave red crystals, m. 135–6°. *N*-(β-Anthraquinonyl)-β-aminopropionitrile (VIII) was obtained in 10% yield by heating (at 115–20°, 60 hrs., in sealed tube) 11.2 g. V, 5.3 g. VII, and 0.5 g. H_2SO_4 (sp. gr. 1.84). Fractional crystn. from EtOH gave orange crystals, m. 151–3°. *N*-(α-Anthraquinonyl)-β-aminopropionic acid (IX) was obtained by 2 methods. I (15.5 g.) and 30 g. KOH in 300 ml. 80% EtOH refluxed 1.5 hrs. at 70–5°, kept at room temp. 36 hrs., dild. with 600 ml. H_2O, filtered, and acidified with 10% HCl gave 10.2 g. IX, red crystals, m. 188° (EtOH). IX was obtained by heating (2 hrs. at 75°) 3 g. VI and 35 g. KOH in 150 ml. 80% EtOH, stirring intermittently 48 hrs. at room temp., dilg. with 300 ml. H_2O, heating to 75°, cooling, and filtering; acidification with HCl pptd. 0.9 g. red crystals, m. 187–8° (EtOH). *N*-(β-Anthraquinonyl)-β-aminopropionic acid (X), orange crystals from EtOH, m. 220–30°, was obtained from IV and VIII by the method used to obtain IX. *N*-(α-Anthraquinonyl)-β-aminopropionic acid-HCl (XI) was obtained by passing dry HCl (2 hrs. at 20–5°) through a soln. of 1 g. IX in 30 ml. MeOH, evapg. the excess MeOH, and pptg. from Et_2O (gray crystals, decompg. at 120–187°). In a moist atm. XI decompd. into HCl and IX. *N*-(β-Anthraquinonyl)-β-aminopropionic acid-HCl, red-gray crystals, decompg. below 220° and at room temp. in a moist atm., was obtained from X by the same method as for XI.

K A Kablov

4 (N3)

VITKUS, Mecys; SUMINAS, A., red.

[Plastic skin surgery] Odos plastika. Vilnius, Mintis, 1965. 234 p. [In Lithuanian] (MIRA 18:6)

VITKUS, M. P., Cand Med Sci -- (diss) "Proximate and remote results of dermoplasty." Vil'nyus, 1960. 31 pp; (Ministry of Higher and Secondary Specialist Education USSR, Vil'nyus State Univ im V. Kapsuskas); 250 copies; price not given; (KL, 31-60, 143)

VITKUS, V. Cand Biol Sci -- (diss) "The Pollution and Self-Purification of the Nyamunas River in XXXXXXXXXXX the ~~Vicinity~~ environs of XXXXXXXXXXXXXX the City of Kaunas." Vil'nyus, 1957. 16 pp 22 cm. (Min of Higher Education USSR, Vil'nyus State Univ im V. Kapsukas), 100 copies (KL, 26-57, 106)

ACC NR: AR6035569 SOURCE CODE: UR/0044/66/000/009/V046/V046

AUTHOR: Paulauskas, Ts. Ts.; Vitkute, A. Yu.

TITLE: Determination of the structure and weight coefficients of pattern classifiers with statistically dependent signals

SOURCE: Ref. zh. Matematika, Abs. 9V308

REF SOURCE: Sb. Avtomatika i vychisl. tekhn. Vil'nyus, 1965, 23-29

TOPIC TAGS: parameter, classifier, classifier structure, classifier weight coefficient, pattern recognition

ABSTRACT: A study was made of problems of the synthesis of classifiers as a function of the nature of the information received from the analyzer. The structure and parameters of a statistical classifier whose input signals are random variables which statistically depend on each other and whose values are both 1 or 0, and +1 or -1, are determined. To recognize patterns with statistically dependent parameters, it is necessary to take, in addition to weighted double signals, also their weighted double, triple, etc., products. With transition from a system of input signals with

Card 1/2 UDC: 51:681.14:155

ACC NR: AR6035569

1; 0 values to a +1; -1 system, the block-diagram of the classifier remains the same and only the expressions for weight coefficients undergo a change. The paper has three illustrations. [Translation of abstract] [DW]

SUB CODE: 09, 12/

Card 2/2

BEZOUSHKA, Irzhi [Bezouska, Jiri], inzh.; VITLACHIL, Iosif [Vytlacil, Josef], inzh.; VALTEC, Yaromir [Walter Jaromir]; CHUNAT, Ye.A. [translator]; SUMNIK, Z.A., red.

[Study of the supply and demand of the population] Izuchenie potrebleniia i sprosa naseleniia. Moskva, Izd-vo "Statistika," 1964. 328 p. (MIRA 17:6)
Translated from the Czech.

VITLAROVA, M.

A Young Record Holder (in Radiotelegraphy). Radio Engineering, #5:16:May 55

VITLAROVA, M.

Following the Prototype of the Fighter. RADIO (Radio), #11:5:Nov 54

VITLAROVA, M.

International Radiotelegraph Competition in Leningrad. RADIO (Radio), #11:6:Nov 54

VITLAROVA, M.

Young champion in radio telegraphy. p. 16. RADIO. (Ministerstvo na poshtite, telegrafite, telefonite i radioto i Tsentralniia suvet na dobrovolnata organizatsiia za sudeistvie na otbranata) Sofiya. Vol. 4, no. 5, 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress Vol. 4, No. 12, December 1955

VITLIN, A.B.

Electric contact cutting of alloyed steel billets. Stan.i instr. 34 no.4:24-27 My '63. (MIRA 16:5)
(Electric metal cutting)

ACCESSION NR: AP3001565 S/0121/63/000/005/0024/0027

AUTHOR: Vitlin, A. B.

TITLE: Electric contact cutting of alloyed steels

SOURCE: Stanki i instrument, no. 5, 1963, 24-27

TOPIC TAGS: electric arc machining, electric contact cutting, air arc machining, A.C. arc cutting, D.C. arc cutting

ABSTRACT: A combination air-arc and electric contact method of cutting steel was experimentally investigated. In this method aluminum and steel discs 500-850 mm in diameter and 5-8 mm thick with air ducts to the periphery were rotated (at approximately 800 rpm) while steel samples were fed into them. A.C. current of up to 1500 amps provided the arc which was continuously reestablished with an oscillator providing 250 000 cps up to 2500 v. The partially vaporized metal was removed by compressed air blown through the peripheral holes in the discs. It was found that metal removal was almost independent of type of steel being cut and was equal to 0.2 mm^3/sec at 300 amps and 0.6 mm^3/sec at 800 amps. Air pressure of 3.5 kg/cm^2 was satisfactory. Secondary arcs on the sides of the wheel were eliminated by applying a layer (0.2-0.3 mm thick) of epoxy on both sides. Stable arcs were

Card 1/2

ACCESSION NR: AP3001565

obtained at a distance of 1-1.5 mm from the work with a voltage difference of 30 v across the gap. A comparison of this type of cutting with A.C. and D.C. air-arc cutting and D.C. electric contact cutting shows that this method is up to five times faster at half or less electric energy requirement than the other methods. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut "Promstal'konstruktsiya" (Institute "Promstal'-konstruktsiya")

SUBMITTED: 00 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: ML NO REF SOV: 014 OTHER: 000

Card 2/2

VITLIN, A.B., inzh.; PLISKEVICH, M.I., inzh.

Production lines for working metal at metal elements plants. Mont. i spets. rab. v stroi. 24 no.4:7-11 Ap '62. (MIRA 15:7)

1. Proyektnyy institut Promstal'konstruktsiya.
(Automation) (Metalwork)

VITLIN, A.B., inzh.

Production line for the manufacture of welded I-beams.
Mont. i spets. rab. v stroi. 24 no.7:7-10 Jl '62. (MIRA 15:6)

1. Proyektnaya kontora Glavstal'konstruktsii Ministerstva stroitel'stva predpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti SSSR.
(Dnepropetrovsk—Beams and girders)

ACCESSION NR: AP4015108 S/0122/64/000/002/0031/0034

AUTHORS: Korniyenko, V. S. (Engineer); Vitlin, A. B. (Engineer)

TITLE: A machine for air metal-arc cutting

SOURCE: Vestnik mashinostroyeniya, no. 2, 1964, 31-34

TOPIC TAGS: metal arc cutting, disk electrode, compressed air, electric regulator, electric arc, workpiece, epoxy resin ED 6

ABSTRACT: An experimental device utilizing a stationary but variable current arc and a rotating disk-electrode for metal-arc cutting was designed and tested. A 380-volt source is used to supply a variable current to the disk which (upon rotating) admits compressed air through three channels into the space between the lower edge of the rotating disk and the workpiece (see Fig. 1 on the Enclosure). Between the nearest edge of the disk and the workpiece (1-15 mm gap) a 30-volt arc is struck which melts the metal, and the melt is then carried away by the compressed air. As the distance between the disk electrode and the workpiece increases, an electric regulator operates a servomechanism which in turn shortens the distance between the disk and the workpiece. Experiments show that the electric arc is

Card 1/3

ACCESSION NR: AP4015108

stable and that the metal removal rate is 2000 mm^3/sec at 300 amps and 6000 mm^3/sec at 800 amps. The cutting rate does not depend on the type of steel used as the workpiece. In these experiments the disk was prepared from epoxy resin ED-6 with addition of silicon carbide grains. A detailed list is given of the operating conditions of the device, and it is shown that it can also be used to form circular taps and holes in various steel pieces. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 12Mar64 ENCL: 0/

SUB CODE: MM NO REF SOV: 006 OTHER: 000

Card 2/3

ACCESSION NR: AP4015108

ENCLOSURE: 01

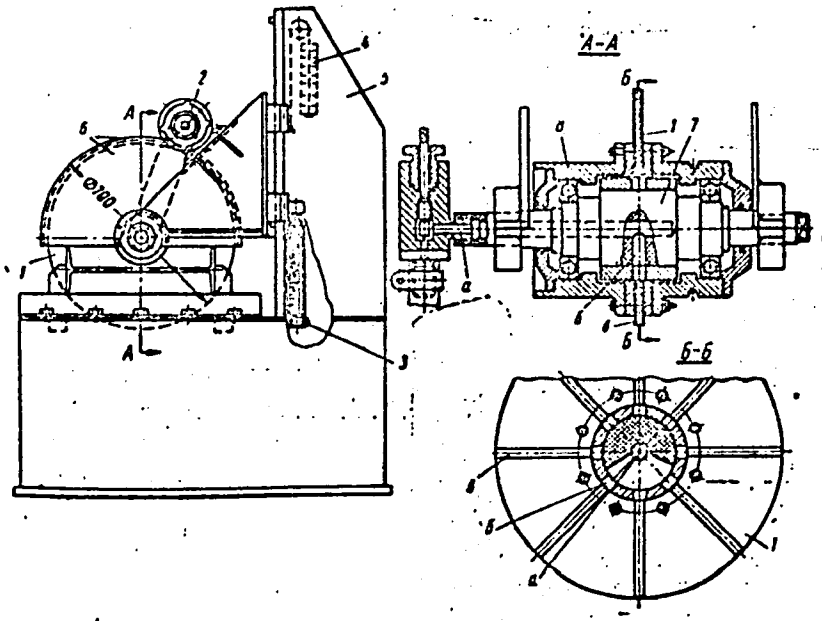


Fig. 1. Machine for air metal-arc cutter (general and side views): 1 - disk electrode; 2 - disk servo-rotor, 3 - disk servo-feed; 4 - counterweight; 5 - frame; 6 - disk casing; 7 - axis; 8 - connecting piece.

Card 3/3

KORNIYENKO, V.S., inzh.; VITIN, A.S., inzh.

Machine for air-arc metal cutting. Vest.mashinostr. 44 no. 2:31-34 F '64. (MIRA 17:7)

KORNIYENKO, V.S., inzh., laureat Leninskoy premii; VITLIN, A.B., inzh.

Machine tools for automatic compressed air-arc treatment of metal. Mont. i spets. rab. v stroi. 25 no.1:26-29 Ja '63. (MIRA 16:6)

1. Proyektnyy institut Promstal'konstruktsiya.
(Metal cutting)

KORNIYENKO, V.S., inzh.; VITLIN, A.S., inzh.

Machines with wear-resistant cutters for the automatic air-arc machining of metals. Sudostroenie 29 no.4:51-54 Ap '63. (MIRA 16:4)
(Electric metal cutting)

VITLIN, V., inzh.; KOROTKOV, V., inzh.; BENIN, Ya., inzh.

Use every means to improve the dust removal in grain elevators. Muk.-elev. prom. 27 no.9:21-24 S '61. (MIRA 15:2)

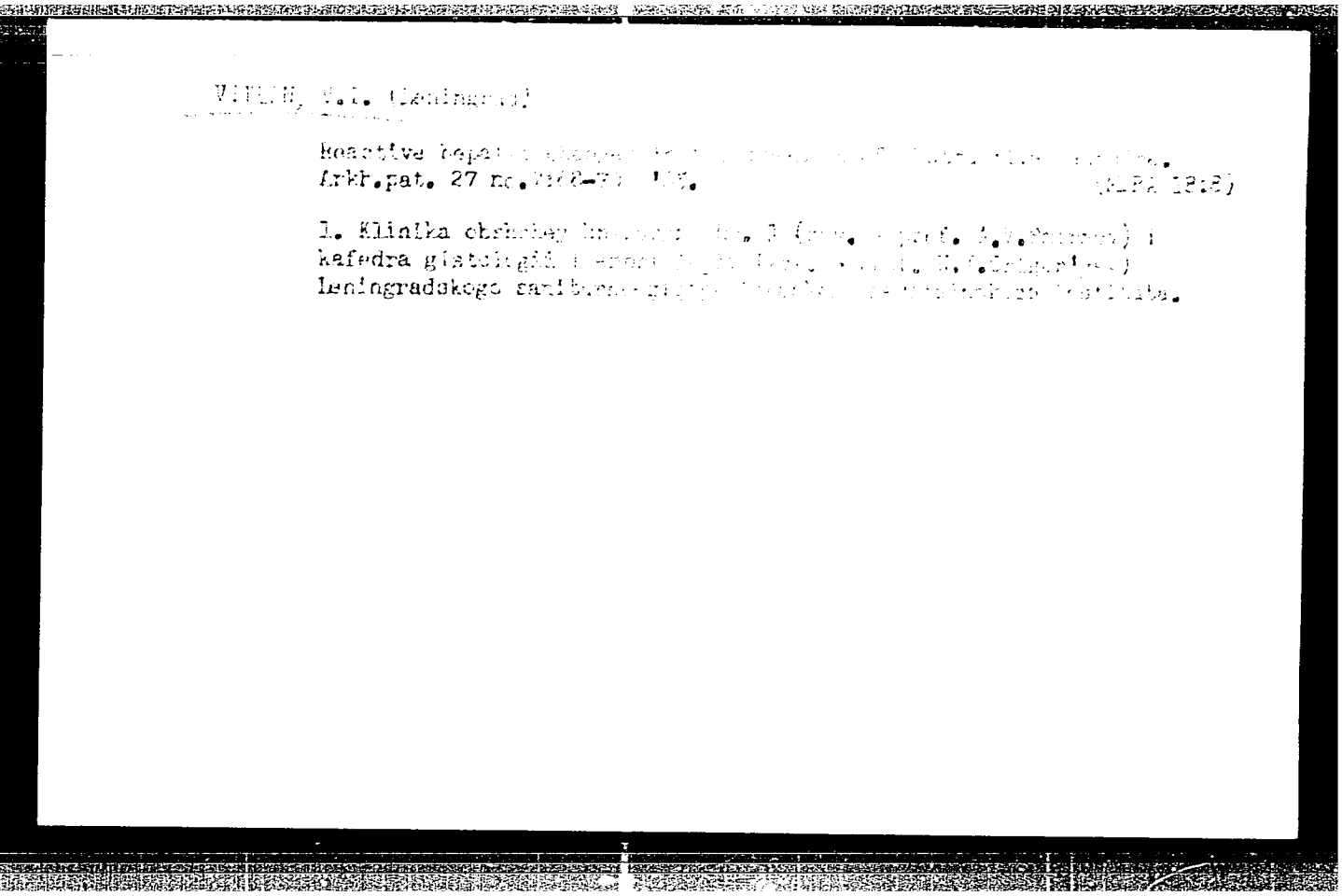
1. Montazhno-naladochnoye upravleniye tresta Spetselevatormel'-stroy.

(Grain elevators)
(Grain—Cleaning)

VELLIN, V.I.; KOLMAKOV, V.N.

Some morphological and functional changes in the liver in obstructive jaundice. Vest. khir. 93 no.11:53-57 N '64.
(MIRA 18:6)

1. Iz 1-y kliniki obshchey khirurgii (zav. - prof. A.V. Smirnov) i biokhimicheskoy laboratorii TSentral'noy nauchno-issledovatel'skoy laboratorii (zav. - dotsent V.N. Kolmakov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.



VITLIN, V.I. (Leningrad)

Arkh.pat. 27 no.7 [illegible]. (MLRA 18:8)

1. Klinika obshchey [illegible] (zav. - prof. A.V. [illegible]) i kafedra gistologii [illegible] (zav. - prof. N.F. [illegible]) Leningradskogo sanitarno- [illegible].

VITLIN, V.I. (Leningrad, Kurakina ulitsa, 1/3, 15-y pavil'on)

Two cases of polycystic changes in the liver. Vest. khir. 92 no.1: 85-86 Ja '64. (MIRA 17:11)

1. Iz 1-y kliniki obshchey khirurgii (zav. - prof. A.V. Smirnov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

NEKRASOV, S.S., prof.; VITIYENKOV, V.D., inzh.

Investigating the turning process in cooling with fluid spray.
Vest.mashinostr. 44 no.3:68-71 Mr '64. (MIRA 17:4)

VITLIYEMOV, V.D., aspirant

Calculation and regulation of an injector for atomizing lubricating and cooling liquids. Izv. TSKHA no.4:233-239 '63. (MIRA 17:1)

ACCESSION NR: AP4026250 S/0122/64/000/003/0068/0071

AUTHORS: Nekrasov, S. S. (Professor); Vitliyemov, V. D. (Engineer)

TITLE: Investigation of machining with vaporized liquid cooling

SOURCE: Vestnik mashinostroyeniya, no. 3, 1964, 68-71

TOPIC TAGS: machining cooling method, coolant supply, vaporized liquid cooling, spray cooling, steel R18, steel 45, tool bit, lathe 1A62

ABSTRACT: The effects of nozzle shape, nozzle diameter, method of application (from above and from below), compressed air pressure, and coolant flow rate on the cooling properties of a vaporized liquid during machining were investigated experimentally using a tool bit of steel R18 to cut samples of steel 45. The nozzle shape shown in Fig. 1 of the Enclosure was investigated. It was found that: a) the diverging nozzle (c) gave the coolest spray and working temperature; b) the work temperature decreased as the coolant flow rate was increased to 40 gm/m^3 of compressed air (at 4 kg/cm^2) and remained constant above that; c) a throat diameter of 1.5 mm was optimum for the geometry and operating pressure. Using this "optimum" nozzle, tool wear was measured for machining without cooling, cooling by pouring the coolant, spraying from above, and spraying from below.

Card 1/3

ACCESSION NR: AP4026250

It was found that spraying from above caused least tool wear but resulted in catastrophic tool failure faster than spraying from below. By changing the air supply pressure and specific coolant flow rate it was found that the work temperature decreased with increasing supply pressure but that the effect of increased coolant flow rate became negligible after a certain flow rate was reached. This flow rate varied for different conditions but was below ≈ 200 gm/hr for all conditions considered. Orig. art. has: 7 figures

ASSOCIATION: Timiryazevskaya sel'skokhozyaystvennaya akademiya (Timiryazevo Agricultural Academy)

SUBMITTED: 00 DATE ACQ: 20Apr64 ENCL: 01

SUB CODE: IE NO REF SOV: 000 OTHER: 000

Card 2/3

ACCESSION NR: AP4026250

ENCLOSURE: 01

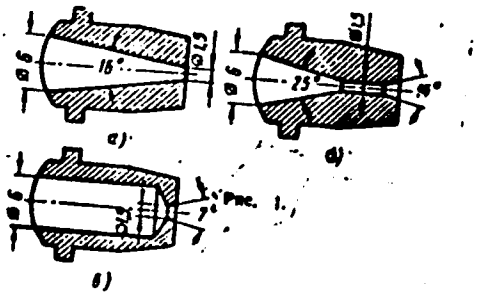


Fig. 1 Experimental nozzles
а- converging, b- cylindrical, c- diverging

Card 3/3

VITLOV, V.

The development of tunny fisheries in our country; [illegible]

P. 35 (MORSKO RIBARSTVO) (Rijeka, Yugoslavia) Vol. 10, no. 2, Feb. 1958

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5, 1958

VITLOV, V.

Good advice from fisher practitioners. p. 258.

Periodical: MORSKO RIBARSTVO.

AGRICULTURE

Vol. 10, no. 12, Dec. 1958.

SO: Monthly List of East European Accessions (EEAI) LC

Vol. 8, No. 4
April 1959, Uncl.

KRISYUK, E.M.; VITMAN, A.D.; VOROB'YEV, V.D.; LATYSHEV, G.D.; SERGEYEV, A.G.

Internal conversion electron spectra of active radiothorium deposits. (Region H 2600 -10300 Gs.cm.). Izv.AN SSSR.Ser.fiz.20 no.8:877-882 Ag '56.

1. Kafedra fiziki Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta imeni V.N.Obraztsova.

(Radiothorium--Spectra)

Vitman, A.D.

KRISYUK, E.M.; VITMAN, A.D.; VOROB'YEV, V.D.; VOROB'YEV, I.V.; IL'IN, K.I.; LATYSHEV, G.D.; LISTENGARTEN, M.A.; SERGEYEV, A.G.

Internal conversion in the Pb^{208} atom in 2615 kev transitions. Izv.AN SSSR.Ser.fiz.20 no.8:883-890 Ag '56. (MLRA 9:12)

1. Kafedra fiziki Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta imeni V.N.Obraztsova.
(Lead--Isotopes)

VENTTSEL', M.K., professor; VITMAN, A.I., redaktor; SHIENSKIY, I.A., tekhnicheskiy redaktor

[Spherical trigonometry; a short course] Sfericheskaia trigonometriia; kratkii kurs. Izd. 2-oe, ispr. i dop. Moskva, Izd-vo geodez. i kartogr. lit-ry, 1948. 153 p. (MLRA 9:12)
(Trigonometry, Spherical)

MIKHNEVICH, Grigoriy Vasil'yevich, dotsent; RYAZANOV, Viktor Pavlovich, dotsent; SIBIRYAKOVA, Aleksandra Dmitriyevna, kand.tekhn.nauk; ORLOV, P.M., prof., retsenzent; ZUBRITSKIY, I.V., prof., retsenzent; MASLOV, A.V., prof., doktor tekhn.nauk, obshchiy red.; VITMAN, A.F., dotsent, red.; SHURYGINA, A.I., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Geodesy] Geodeziia. Pod obshchei red. A.V.Maslova. Moskva, Izd-vo geodez.lit-ry. Pt.2. 1959. 334 p. (MIRA 12:9)
(Geodesy)

MIKHNEVICH, Grigoriy Vasil'yevich, dots.; RYAZANOV, Viktor Pavlovich, dots.; SIBIRYAKOVA, Aleksandra Dmitriyevna, dots. Prinimali uchastiye: BATRAKOV, Yu.G., dots.; VITMAN, A.I., dots.; YUNOSHEV, L.S., aspirant; KOROBOCHKIN, M.I., assistent; NEKHOROSHEV, M.Ye., retsenzent; BOGOLYUBOVA, N.S., retsenzent; NIKOLENKO, N.F., retsenzent; CHERNUKHIN, L.S., retsenzent; NESHCHADIMOV, L.S., retsenzent; LARCHENKO, Ye.G., prof., red.

[Surveying] Geodeziia. Moskva, Nedra. Pt.2., 1964. 338 p. (MIRA 17:12)

1. Zamestitel' nachal'nika Upravleniya sel'skokhozyaystvennykh aerofotos"yemok (for Nekhoroshev). 2. Kafedra vysshey geodezii Omskogo sel'skokhozyaystvennogo instituta (for Bogolyubova, Nikolenko, Chernukhin, Neshchadimov).

ZAKATOV, Petr Sergeyevich, prof.; MOROZOV, V.M., prof., retsenzent; VITMAN, A.I., dots., retsenzent; BAGRATUNI, G.B., red.

[Course in higher geodesy; spheroidal geodesy, theoretical geodesy, and the elements of gravimetry] Kurs vysshei geodezii; sferoidicheskaia geodeziia, teoreticheskaia geodeziia i osnovy gravimetrii. Izd. 3., dop. i ispr. Moskva, Izd-vo "Nedra," 1964. 503 p. (MIRA 17:8)

VENTTSEL', M.I., prof., doktor tekhn. nauk; VITMAN, A.I., red.; VASIL'YEVA, V.I., red. izd-va; ROMANOVA, V.V., tekhn. red.

[Fundamentals of theoretical astronomy]Osnovy teoreticheskoi astronomii. Moskva, Geodezizdat, 1962. 210 p. (MIRA 15:8)
(Astronomy)

(BR)

ACCESSION NR: AP4024039 S/0048/64/028/002/0222/0226

AUTHOR: Vitman, B.D.; Voinova, N.A.; Dzhelepov, B.S.

TITLE: Gamma radiation from As^{76} [Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14 to 22 Feb. 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 222-226

TOPIC TAGS: γ-ray spectrum, γ-transition, As^{76}, As^{76} decay

ABSTRACT: The present study was undertaken with a view to obtaining more accurate values for the relative intensities of the γ-rays from As^{76} and to search for weak γ-lines not observed hitherto. Nine sources with initial activities from 20 to 40 Curie were prepared by irradiating 1 g samples, sealed in quartz tubes, in the Physico-technical Institute reactor; the initial material was spectroscopically pure metallic arsenic. The γ-spectrum was investigated on the Elotron (recoil γ-spectrometer) of the All-Union Scientific Research Institute of Metrology under standard conditions (V.D.Vitman, N.A.Voinova and B.S.Dzhelepov, Izv.AN SSSR,Ser.fiz.27,249, 1963). The experimental spectrum and its resolution into components is presented in five figures. In all there were detected 25 γ-lines, including several not clearly

Card 1/2

ACCESSION NR: AP4024039

observed hitherto (the 510 keV γ-rays reported by G.Backstrom and J.Marklund (Arkiv. fys.17,393,1960) were not observed). The energy and intensity values are tabulated and compared with the data of earlier investigators. In general, the energy values obtained in the present investigation agree with the data of Backstrom and Marklund; there is also good agreement as regards the intensities of the strong lines. Divergences as regards the intensities of some of the weaker lines are attributed to the strong Compton background in the spectrometer employed by Backstrom and Marklund. Not all the newly detected lines can be accommodated in the decay scheme proposed by Backstrom and Marklund, but the present data are inadequate for proposing a more comprehensive decay scheme. Orig.art.has: 5 figures and 1 table.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut metrologiy im. D.I.Mendeleyeva (All-Union Scientific Research Institute of Metrology); Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademiy nauk SSSR(Physicotechnical Institute, Academy of Sciences, SSSR)

SUBMITTED: 20Sep63 DATE ACQ: 08Apr64 ENCL: 00

SUB CODE: NS NR REF SOV: 003 OTHER: 002

Card 2/2

L 13604-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) JD

ACC NR: AP6002909 SOURCE CODE: UR/0286/65/000/024/0073/0073

INVENTOR: Cheskis, Kh. I.; Vitman, D. V.; Boyarinova, A. P.

ORG: none

TITLE: Oxidation resistant chromium-nickel steel. Class 40, No. 177080 [announced by the State Design and Scientific Research Institute of Petroleum Machinery (Gosudarstvennyy proyektnyy i nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 73

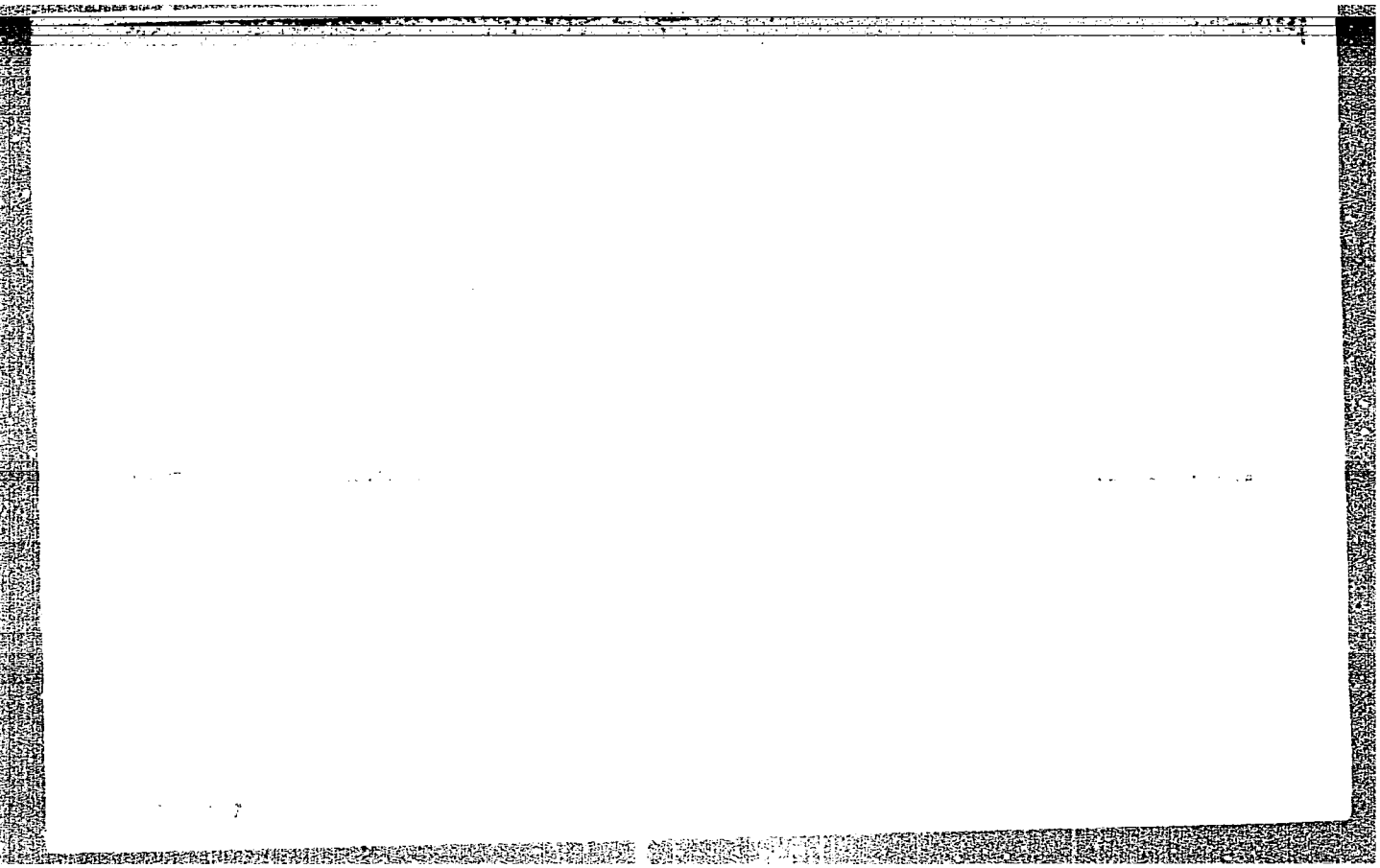
TOPIC TAGS: steel, oxidation resistant steel, chromium containing steel, nickel containing steel, manganese containing steel, silicon containing steel

ABSTRACT: This Author Certificate introduces an oxidation-resistant chromium-nickel steel with increased resistance to carburizing. The steel contains 18—25% chromium, 8—18% nickel, 6—8% manganese, 1.3—3% silicon, 0.3% max carbon, 0.2% max nitrogen, 0.025% max sulfur, and 0.035% max phosphorus. [AZ]

SUB CODE: 11/ SUBM DATE: 17Sep63/ ATD PRESS: 4187

stainless steel

Card 1/1 UDC: 629.15—194.3.24.26



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120013-9"

VITMAN, D.V., inzhener; TARMOSIN, A.M., inzhener.

Hard surfacing of flies with a chromium-molybdenum alloy. Svar. proizv. no.5:18-19 My '57. (MLRA 10:6)

1. Orguglemash. (Hard facing) (Chromium-molybdenum alloys)

Vitman, D.V.

135-5-6/14

SUBJECT: USSR/Welding

AUTHORS: Vitman, D.V., Engineer and Tarmosin, A.M. Engineer.

TITLE: Surfacing Forging Dies with Chrome-Molybdenum Alloy. (Naplavka shtampov khromomolibdenovym splavom).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 5, pp 18-19 (USSR).

ABSTRACT: The article briefly reviews the available data and gives the results of the experimental work on this subject by the author's institute. Surfacing die blocks for hot and cold punch presses by electrodes "Ш-7" resulted in the following approximate composition of the facing metal: 2.33 % Cr, 0.24 % Mn, 0.57 % C, 0.18 % Si, 0.82 % Mo. The facing was always sound and the slag was easily removed. Some authors (1), (4), consider steel "45" as the best suitable material for die blanks. Experiments showed that this steel gives good results in production of two-layer cold punching dies, but is not permissible for hot dies because of insufficient hardness. Steel "40X" and rim steel make die blanks of higher hardness. Experience had shown that the previously practiced groove depth of 4-6 mm is insufficient, and with 8 mm deep grooves a die may be re-ground three or even

Card 1/2

135-5-6/14

TITLE: Surfacing Forging Dies with Chrome-Molybdenum Alloy. (Naplavka shtampov khromomolibdenovym splavom).

four times.

The article describes the most effective procedures for heat treatment.

The electrodes "Ш-7" are also applicable for surfacing the blades of guillotine shears, and fast-wearing machine tool parts.

The article lists 4 references, all Russian.

ASSOCIATION: "ОРГУГЛЕМАШ" (Orguglemash)

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

L 36820-66 EWP(k)/EWT(m)/T/EWL(v)/EWL(t)/ETI IJP(c) JD/HM

ACC NR: AP6019429 SOURCE CODE: UR/0135/66/000/006/0024/0026

AUTHOR: Stroyev, V. S. (Engineer); Tarkhov, N. A. (Engineer); Vitman, D. V. (Engineer)

ORG: Moscow Experimental Welding Plant (Moskovskiy opytnyy svarochnyy zavod)

TITLE: Arc welding of heat resistant steels

35
B

SOURCE: Svarochnoye proizvodstvo, no. 6, 1966, 24-26

TOPIC TAGS: arc welding, heat resistant steel, welding electrode

ABSTRACT: An extensive table gives the chemical composition and the mechanical characteristics of 8 different steels used for electrode material in the arc welding of heat resistant steels. A series of figures gives the results of tests of metal melted with the electrodes shown in the table. A further table, based on experimental data, lists the different electrodes and makes detailed recommendations as to their most advantageous regions of application. Welded constructions requiring subsequent mechanical working to relieve internal stresses may by subjected to austenizing at a slow rate of heating (20-30°/hour) up to 425-450°C, with holding at this temperature for 2 to 4 hours, and

Card 1/2 UDC: 621.791.753.4:669.14.018.44

L 36820-66

ACC NR: AP6019429

then a final fast heating to 1050-1250°C and holding for 2 to 3 hours, with fast cooling. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 002

Card 2/2

L 36464-66 EWP(k)/EWT(m)/T/EWP(v)/EWP(t)/ETI IJP(c) JD/HM

ACC NR: AP6021800 (N) SOURCE CODE: UR/0413/66/000/012/0063/0064

INVENTOR: Stroyev, V. S.; Vitman, D. V.

ORG: none

TITLE: Electrode for welding oxidation-resistant steels. Class 21, No. 182816

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 63-64

TOPIC TAGS: oxidation resistant steel, steel welding, welding electrode, METAL OXIDATION, STEEL

ABSTRACT: This Author Certificate introduces an electrode for welding oxidation-resistant steel. The coating of the electrode contains 26% fluorite, 27% marble, 2% aluminum powder, 14% chromium, 23% ferrosilicon, 6% manganese and 2% mica powder. The last two components are added to improve the weld resistance against carburization.

[AZ]

SUB CODE: 13/ SUBM DATE: 28Feb64/ ATD PRESS: 5040

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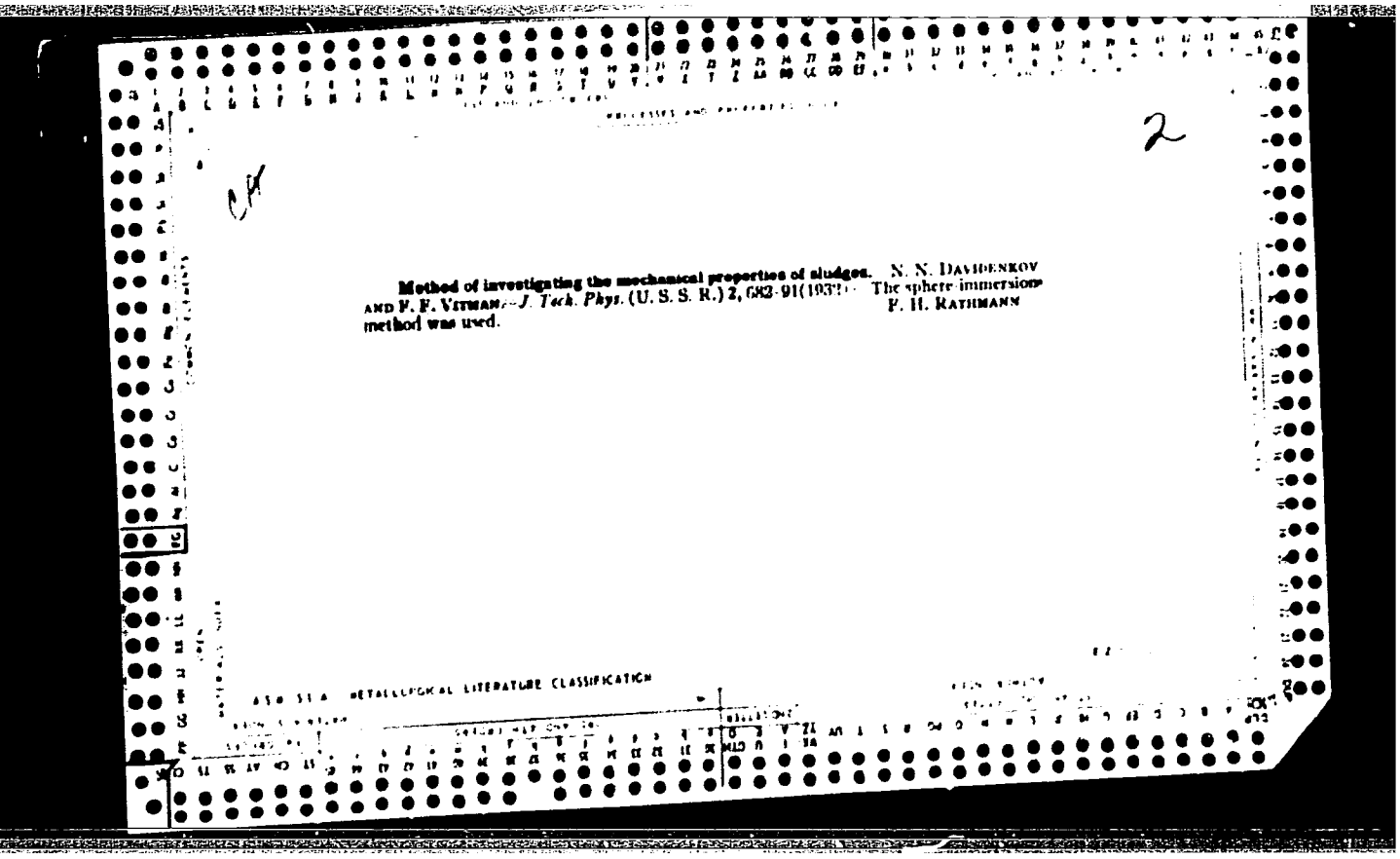
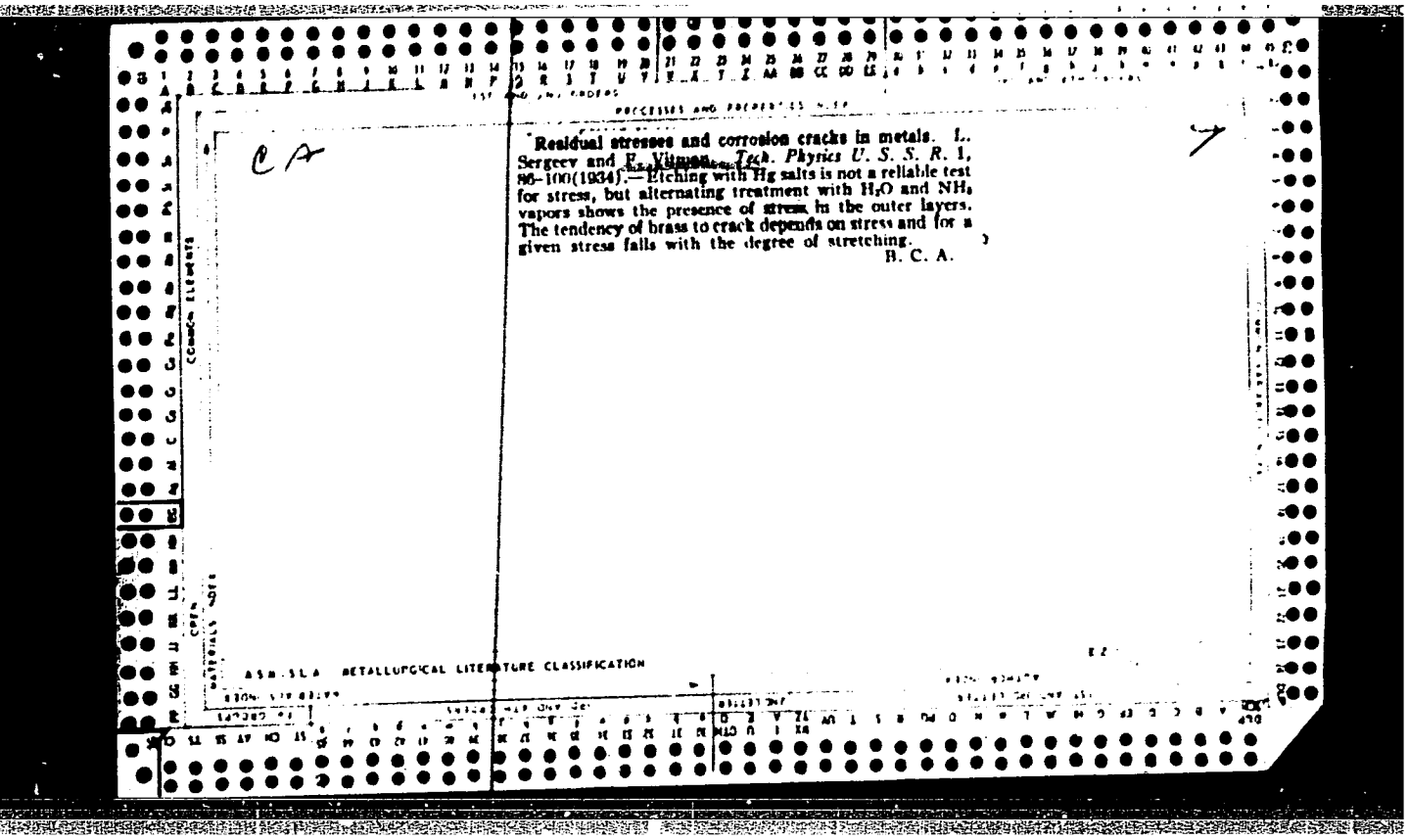


2

Method of investigating the mechanical properties of sludges. N. N. DAVIDENKOV AND F. F. VITMAN.—*J. Tech. Phys.* (U. S. S. R.) 2, 682-91(1937)— The sphere-immersion method was used.

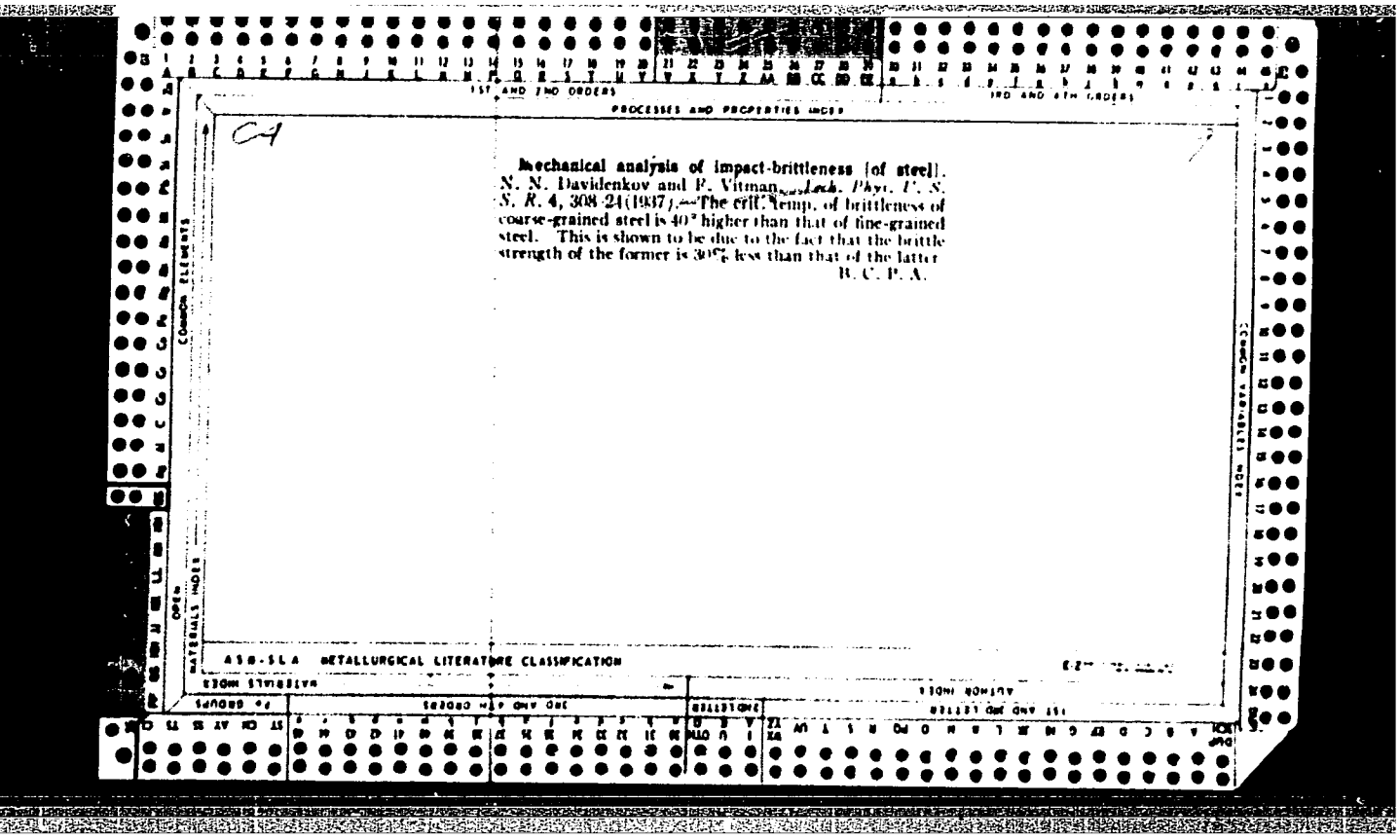
F. H. RATHMANN

ASM 31-A METALLURGICAL LITERATURE CLASSIFICATION



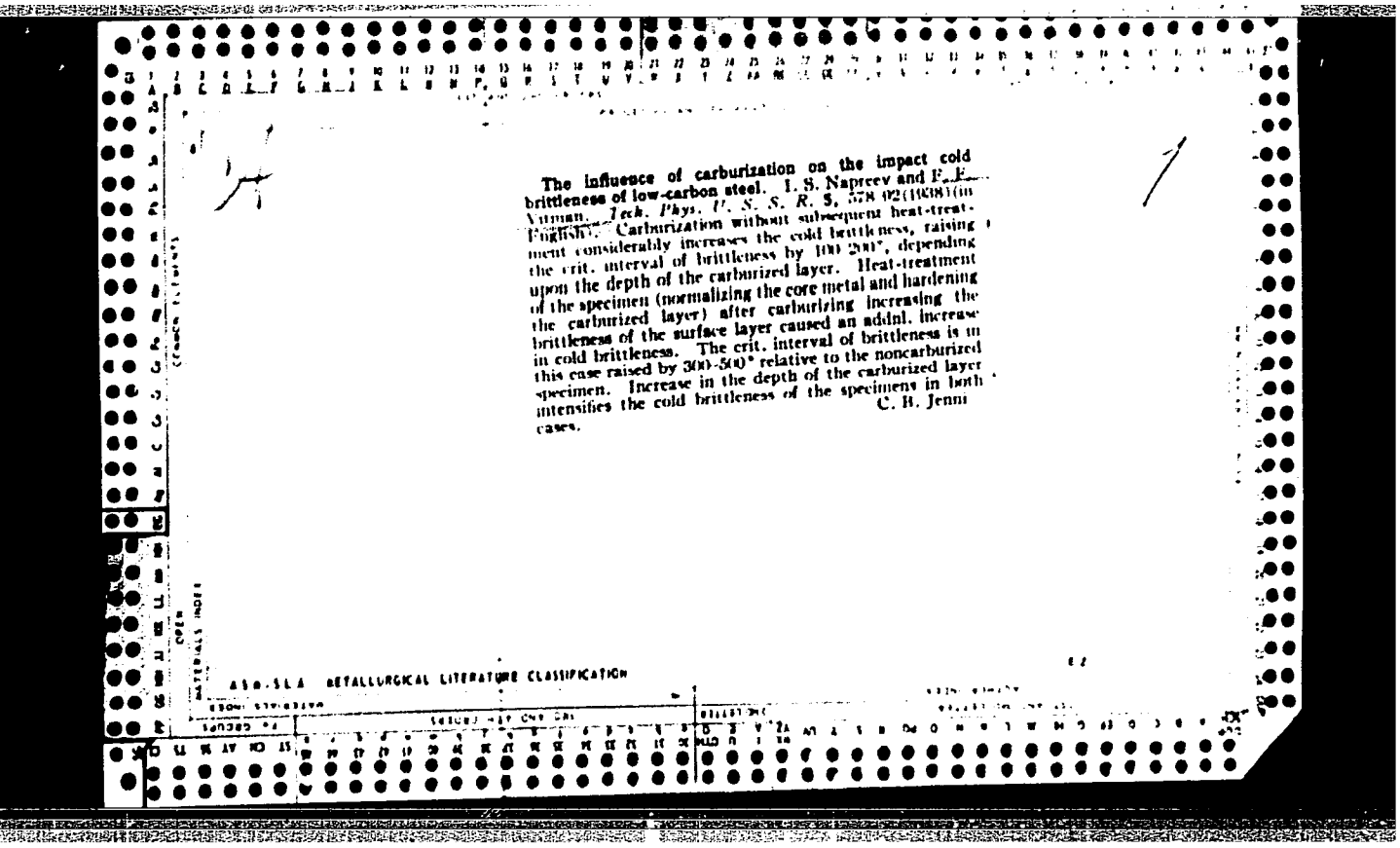
Residual stresses and corrosion cracks in metals. L. Sergeev and P. Vitman. *Tech. Physics U. S. S. R.* 1, 86–100(1934).—Etching with Hg salts is not a reliable test for stress, but alternating treatment with H_2O and NH_3 vapors shows the presence of stress in the outer layers. The tendency of brass to crack depends on stress and for a given stress falls with the degree of stretching.

B. C. A.



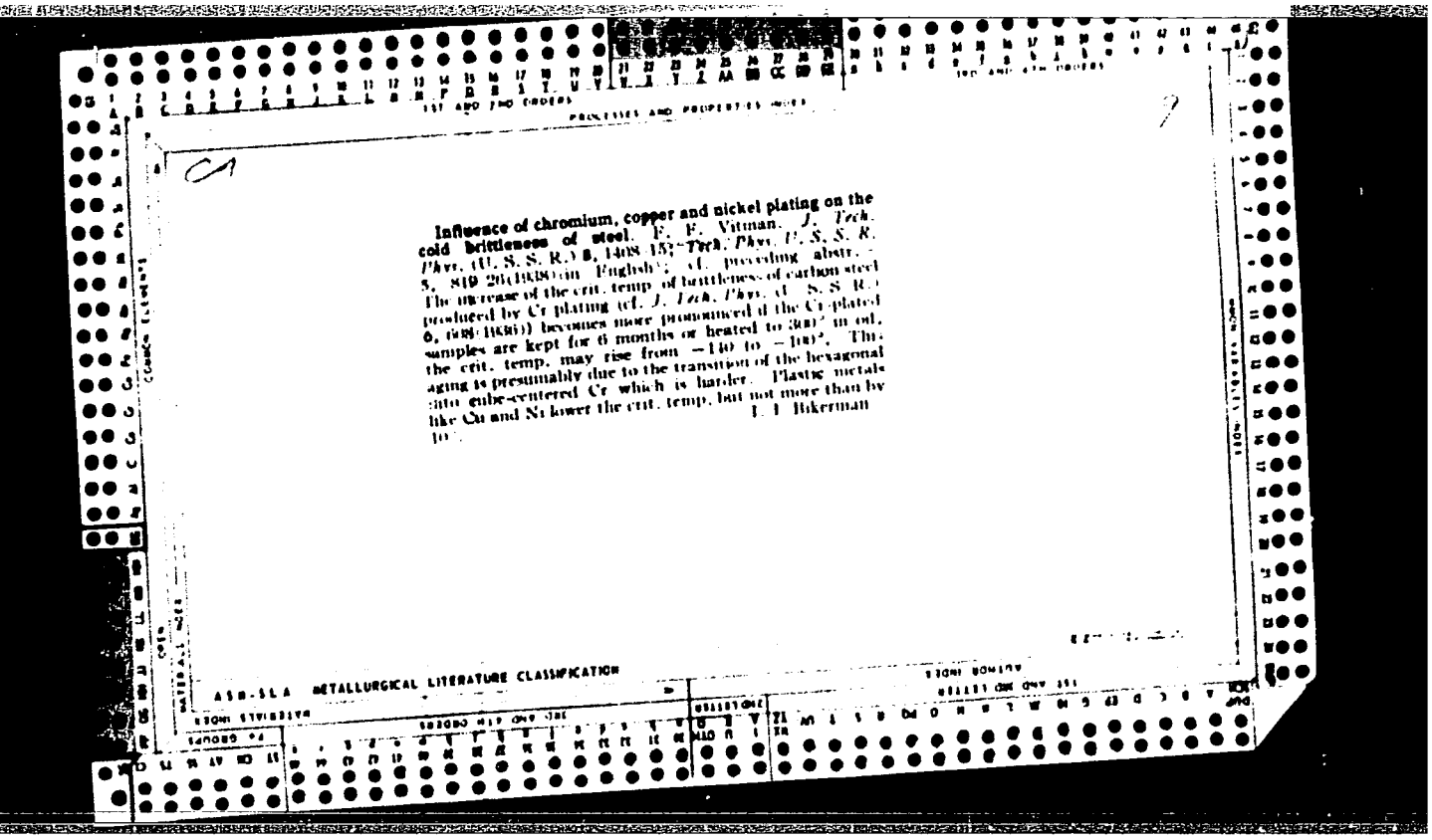
C4

Mechanical analysis of impact-brittleness [of steel]. N. N. Davidenkov and P. Vitman. *Zavod. Lab. Phys. U. S. S. R.* 4, 308-24 (1937).—The crit. temp. of brittleness of coarse-grained steel is 40° higher than that of fine-grained steel. This is shown to be due to the fact that the brittle strength of the former is 30% less than that of the latter.
B. C. P. A.

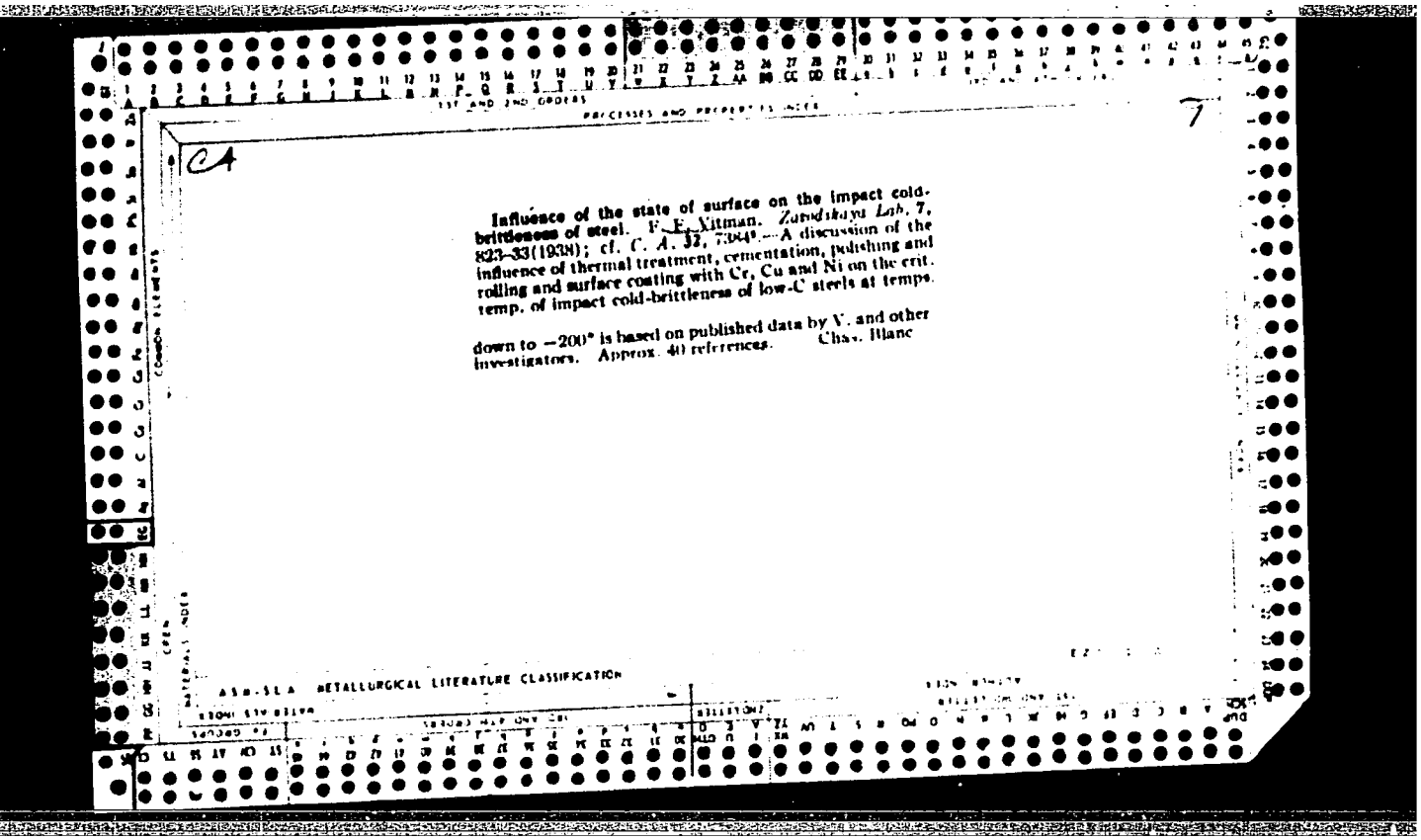


The influence of carburization on the impact cold brittleness of low-carbon steel. I. S. Napreev and F. F. Vitman. *Tech. Phys. U. S. S. R.* **5**, 578-92(1938)(in English). Carburization without subsequent heat-treatment considerably increases the cold brittleness, raising the crit. interval of brittleness by 100-200°, depending upon the depth of the carburized layer. Heat-treatment of the specimen (normalizing the core metal and hardening the carburized layer) after carburizing increasing the brittleness of the surface layer caused an addnl. increase in cold brittleness. The crit. interval of brittleness is in this case raised by 300-500° relative to the noncarburized specimen. Increase in the depth of the carburized layer intensifies the cold brittleness of the specimens in both cases.

C. B. Jenni



Influence of chromium, copper and nickel plating on the cold brittleness of steel. F. F. Vitman. *J. Tech. Phys. (U. S. S. R.)* **8**, 1408-15; *Tech. Phys. U. S. S. R.* 5, 819-20(1938)(in English); cf. preceding abstr.—The increase of the crit. temp. of brittleness of carbon steel produced by Cr plating (cf. *J. Tech. Phys. U. S. S. R.* 6, 1081(1936)) becomes more pronounced if the Cr-plated samples are kept for 6 months or heated to 300° in oil, the crit. temp. may rise from −140 to −110°. This aging is presumably due to the transition of the hexagonal into cube-centered Cr which is harder. Plastic metals like Cu and Ni lower the crit. temp. but not more than by 10°. I. I. Bikerman

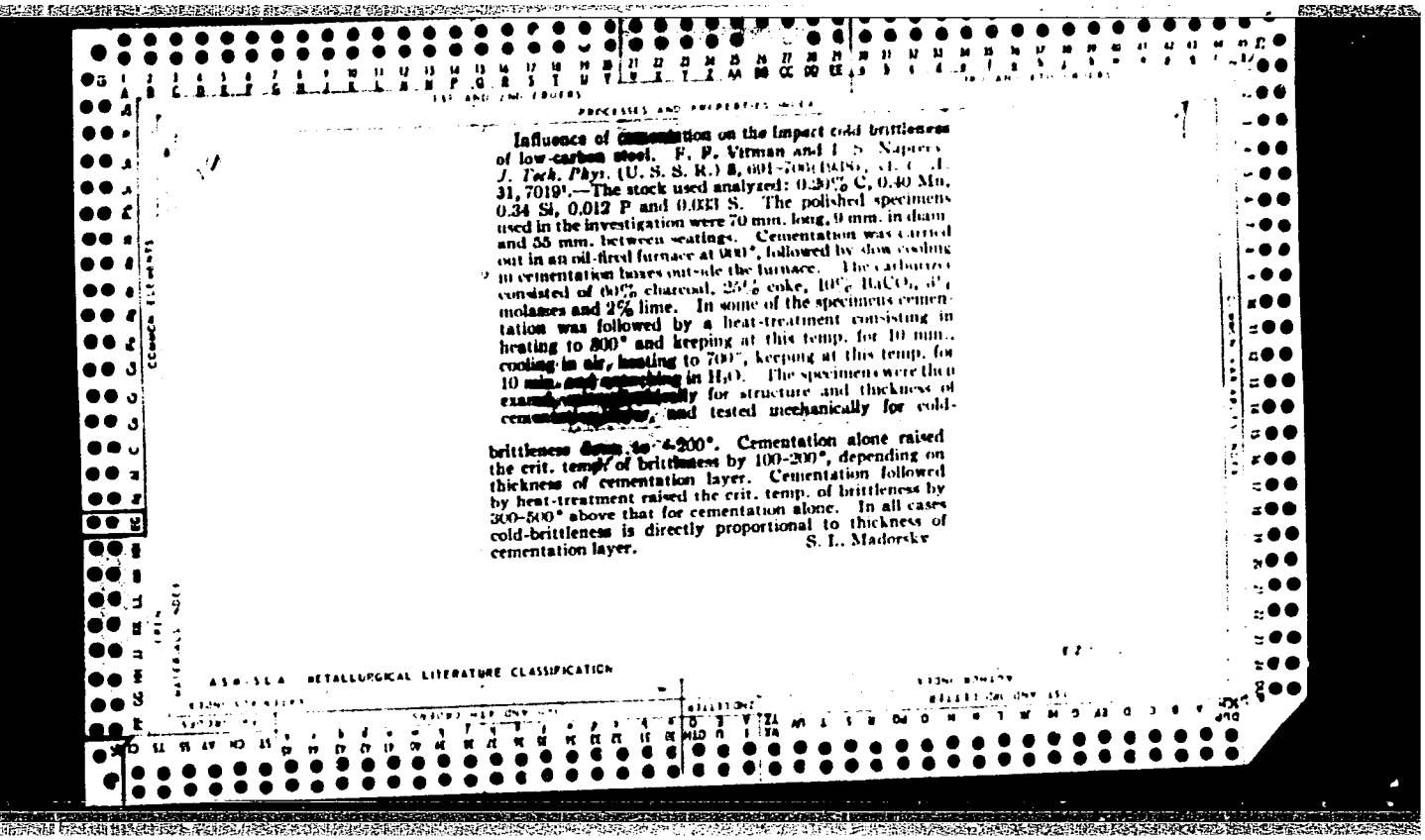


CA

7

Influence of the state of surface on the impact cold-brittleness of steel. F. F. Yitman. *Zavodskaya Lab.* 7, 823–33(1938); cf. *C. A.* 32, 7304⁹.—A discussion of the influence of thermal treatment, cementation, polishing and rolling and surface coating with Cr, Cu and Ni on the crit. temp. of impact cold-brittleness of low-C steels at temps. down to −200° is based on published data by V. and other investigators. Approx. 40 references. Chas. Blanc

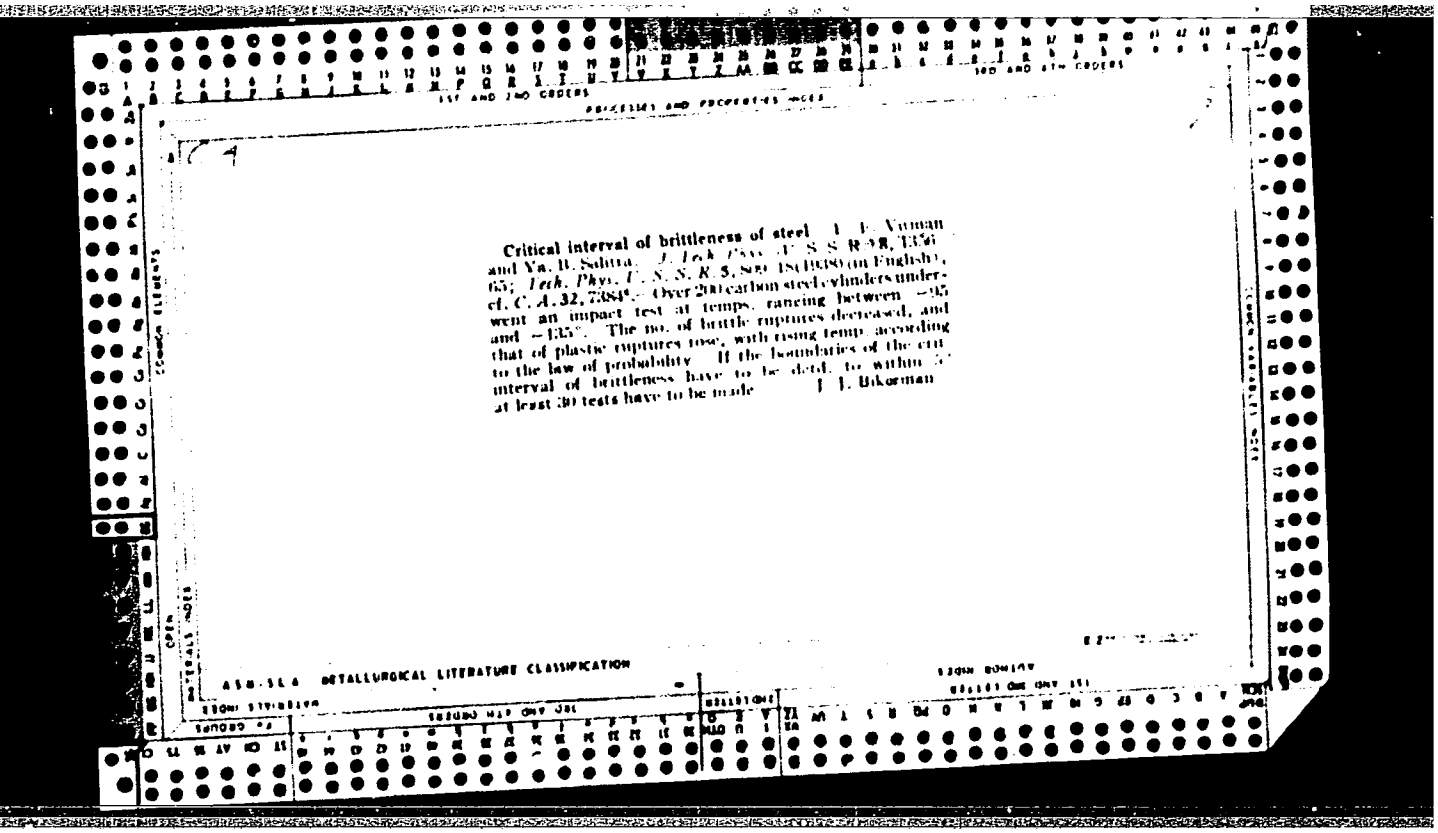
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Influence of cementation on the impact cold brittleness of low-carbon steel. F. P. Vitman and I. S. Napetva. *J. Tech. Phys.* (U. S. S. R.) 8, 601–7(1938); C. A. 31, 7019[9].—The stock used analyzed: 0.30% C, 0.40 Mn, 0.34 Si, 0.012 P and 0.031 S. The polished specimens used in the investigation were 70 mm. long, 9 mm. in diam. and 55 mm. between seatings. Cementation was carried out in an oil-fired furnace at 930°, followed by slow cooling in cementation boxes outside the furnace. The carburizer consisted of 60% charcoal, 25% coke, 10% $BaCO_3$, 4% molasses and 2% lime. In some of the specimens cementation was followed by a heat-treatment consisting in heating to 800° and keeping at this temp. for 10 min., cooling in air, heating to 700°, keeping at this temp. for 10 min. and quenching in H_2O. The specimens were then examined microscopically for structure and thickness of cementation layer, and tested mechanically for cold-brittleness down to −200°. Cementation alone raised the crit. temp. of brittleness by 100–200°, depending on thickness of cementation layer. Cementation followed by heat-treatment raised the crit. temp. of brittleness by 300–500° above that for cementation alone. In all cases cold-brittleness is directly proportional to thickness of cementation layer.

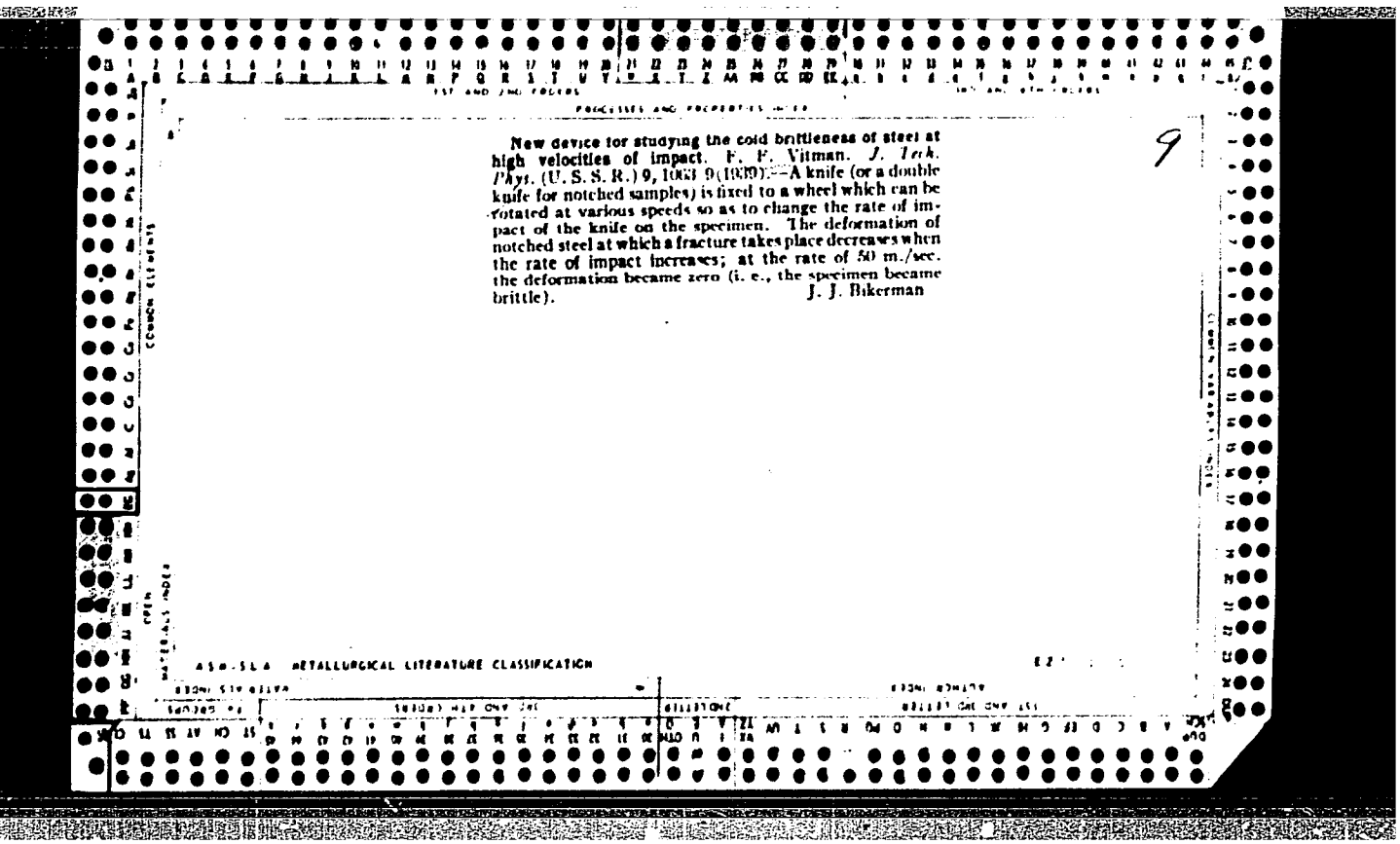
S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Critical interval of brittleness of steel. I. P. Vinman and Ya. B. Saltina. *J. Tech. Phys. U. S. S. R.* 5, 880-5(1938)(in English); cf. *C. A.* 32, 7884⁴. Over 200 carbon steel cylinders underwent an impact test at temps. ranging between −95 and −135°. The no. of brittle ruptures decreased, and that of plastic ruptures rose, with rising temp. according to the law of probability. If the boundaries of the crit. interval of brittleness have to be detd. to within 5°, at least 30 tests have to be made. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

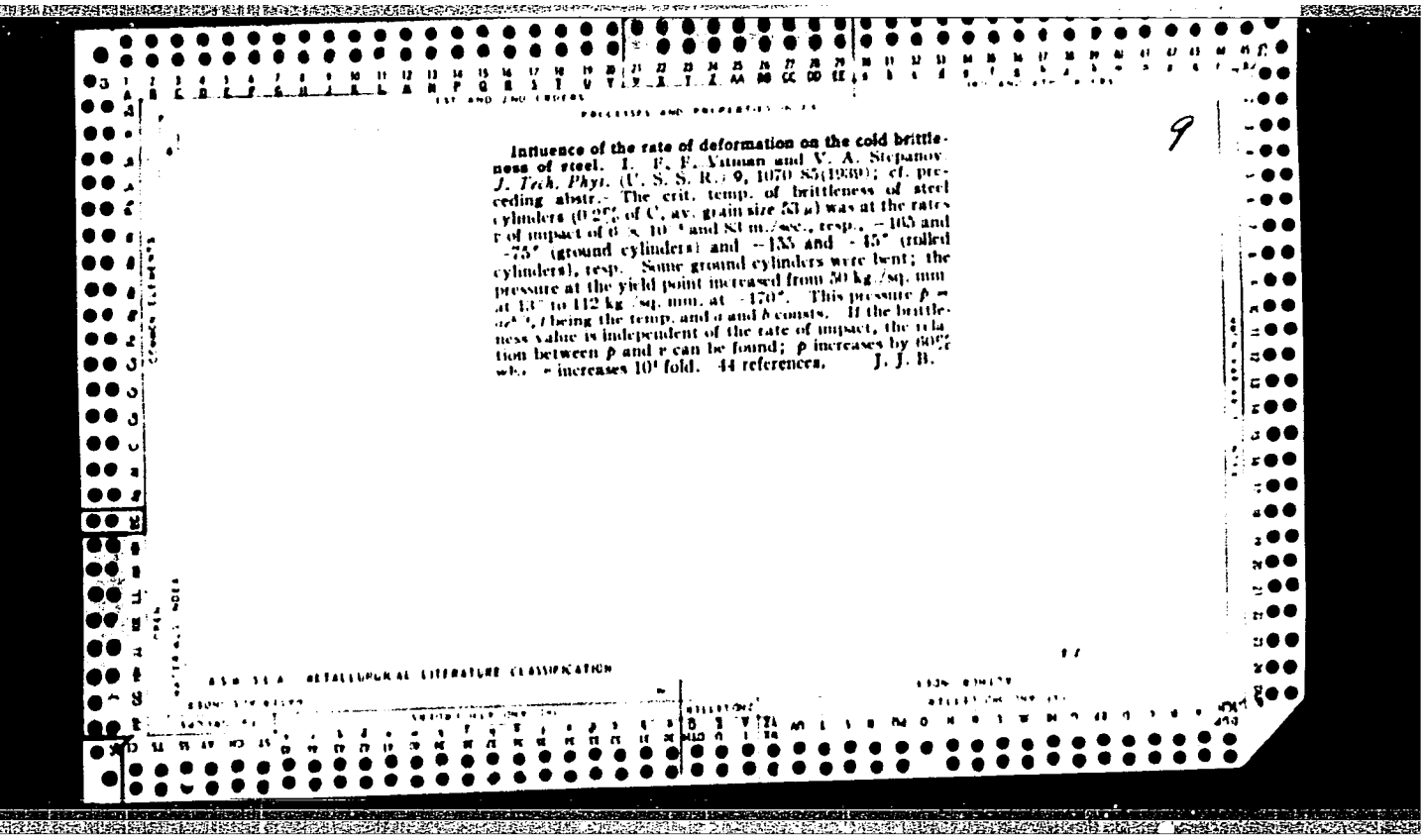


New device for studying the cold brittleness of steel at high velocities of impact. F. F. Vitman. *J. Tech. Phys.* (U. S. S. R.) 9, 1083–9 (1939).—A knife (or a double knife for notched samples) is fixed to a wheel which can be rotated at various speeds so as to change the rate of impact of the knife on the specimen. The deformation of notched steel at which a fracture takes place decreases when the rate of impact increases; at the rate of 50 m./sec. the deformation became zero (i. e., the specimen became brittle).

J. J. Bikerman

9

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Influence of the rate of deformation on the cold brittleness of steel. I. F. F. Yatman and V. A. Stepanov. *J. Tech. Phys.* (U. S. S. R.) 9, 1070-85(1939); cf. preceding abstr.—The crit. temp. of brittleness of steel cylinders (0.2% of C, av. grain size 53 μ) was at the rates of impact of 0.8 × 10⁻³ and 81 m./sec., resp., −105 and −75° (ground cylinders) and −135 and −45° (rolled cylinders), resp. Some ground cylinders were bent; the pressure at the yield point increased from 50 kg./sq. mm. at 13° to 112 kg./sq. mm. at −170°. This pressure $p = a\theta^b$, θ being the temp. and a and b consts. If the brittleness value is independent of the rate of impact, the relation between p and v can be found; p increases by 60% when v increases 10^4 fold. 44 references. J. J. B.